

**SERVICE  
MANUAL PM-84**

**marantz®**

**model PM-84**

*Stereo Pre Main Amplifier*

## MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

### ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, MARANTZ part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

MARANTZ S.A.  
EUROPEAN PARTS DEPARTMENT  
2, Avenue Léopold III  
B-7120 PERONNES-lez-BINCHE  
BELGIUM  
TWX: 57589 SEPLT B

SUPERSCOPE NATIONAL PARTS DEPARTMENT  
20525 Nordhoff Street  
Chatsworth, California 91311  
Phone: 1-800-423-5108  
Phone: 1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

### PARTS ORDERING:

Parts may be ordered from the following addresses:

#### EUROPE

**MARANTZ S.A.**  
European Parts Department  
2, Avenue Léopold III  
B-7120 Péronnes-lez-Binche  
Belgium

**MARANTZ S.A.**  
326 Avenue Louise Bte 32  
1050 Bruxelles  
Belgium

**MARANTZ AUDIO U.K. LTD**  
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Saxon Way Industrial Estate  
Moor Lane  
Harmondsworth UB7 OLW  
Great Britain

**MARANTZ AUSTRIA Ge.M.B.H.**  
25 Franz Lisztgasse  
2380 Perchtoldsdorf  
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**MARANTZ BELGIUM**  
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1080 Brussels  
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**MARANTZ DENMARK**  
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3460 Birkerød  
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92600 Asnières  
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**MARANTZ GERMANY**  
**G.M.B.H.**  
Max Planckstrasse 22  
6072 Dreieich 1  
Germany

**MARANTZ ITALIANA S.p.A.**  
Via Monte Napoleone 10  
20121 Milano  
Italy

**MARANTZ NEDERLAND B.V.**  
Wagemackersweg 3  
3449 H.V. Woerden  
Netherlands

**MARANTZ SVENSKA A.B.**  
Svartviksvägen 56  
Tråneberg  
Bromma  
Sweden

**AUSTRALIA**  
**MARANTZ AUSTRALIA PTY**  
19 Chard Road  
Brookvale, NSW 2100  
Australia

**U.S.A.**  
**MARANTZ COMPANY, INC.**  
National Service Dept.  
P.O. Box 577  
Chatsworth, CA 91311  
U.S.A.

**JAPAN**  
**MARANTZ JAPAN, INC.**  
35-1, 7-chome, Sagamiono  
Sagamihara-shi, Kanagawa  
Japan

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

### NOTE—FOR U.S.A. ONLY

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If, for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

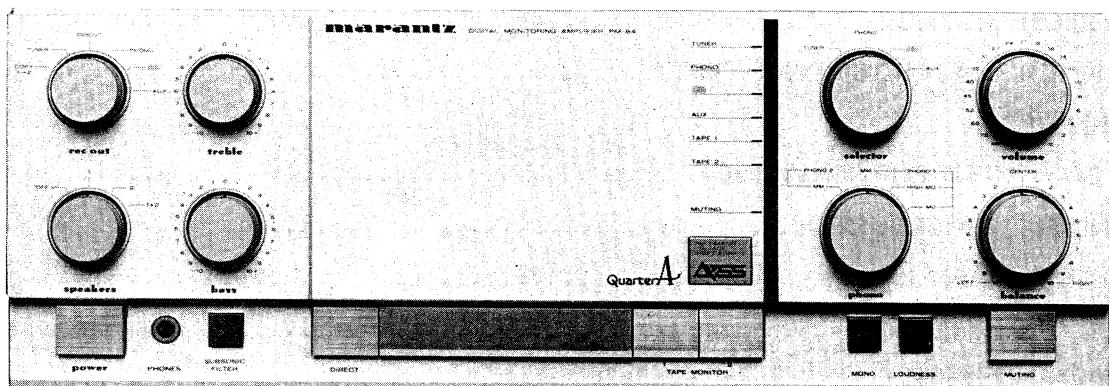
Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from SUPERSCOPE NATIONAL PARTS DEPARTMENT.

**marantz®**

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## MODEL PM-84 STEREO PRE MAIN AMPLIFIER



## INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM-84 Stereo Pre Main Amplifier.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

### 1. SHOCK, FIRE HAZARD SERVICE TEST:

**CAUTION:** After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit be repaired or corrected before AC power is applied, and verified before return to user/customer.

Ref. UL standard NO. 1270. Para. 66. 3. D (Mandatory Test after servicing Electrical Appliances, effective 7-1-83).

## 2. P.W. BOARDS

As can be seen from the circuit diagram, the chassis of Model PM-84 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Phono Amp . . . . . mounted on P.W. Board P400
2. Voltage Amp . . . . . mounted on P.W. Board P700
3. Main Amp . . . . . mounted on P.W. Board P701
4. Bias TR. . . . . mounted on P.W. Board P702
5. Bias TR. . . . . mounted on P.W. Board P703
6. Tone . . . . . mounted on P.W. Board PE00
7. Tone Volume . . . . . mounted on P.W. Board PE01
8. Volume . . . . . mounted on P.W. Board PG00
9. Filter . . . . . mounted on P.W. Board PH00
10. Fuse . . . . . mounted on P.W. Board PP00
11. Switch . . . . . mounted on P.W. Board PS00
12. Speaker Switch . . . . mounted on P.W. Board PT00
13. Speaker Terminal . . . . mounted on P.W. Board PT50
14. Headphone Jack . . . . mounted on P.W. Board PW00
15. Function LED . . . . . mounted on P.W. Board PY00

### 3. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM-84 Stereo Pre Main Amplifier.

Item	Use
AM Signal Generator	Signal source for AM alignment
Test Loop	Use with AM Signal Generator
FM Signal Generator MPX Signal Generator	Signal source for FM alignment Stereo separation alignment and trouble shooting
Distortion Analyzer Audio Oscillator AC VTVM	Distortion measurements Sinewave and squarewave signal source Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting
Frequency Counter	MPX Oscillator adjustment (VCO)
Circuit Tester	Trouble shooting
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to tuner
Line Voltmeter	Monitors potential of primary power to tuner
Variable Autotransformer	Adjusts level of primary power to tuner
DC Digital Voltmeter	Adjust the DC offset of main amplifier output. Adjust the center meter of FM tuner.

### 4. ALIGNMENT PROCEDURES

#### 4.1 Idling Adjustment

- Set the speaker terminal load in open condition.
- Connect a digital voltmeter between TP-1 and TP-2 and short-circuit TP-5 to ground.
- Adjust R733 so that the output of the digital voltmeter becomes 15mV. (Class AB)
- Disconnect TP-5 from ground and adjust R729 so that the digital voltmeter output becomes 270mV. (Class A LOW)
- Short-circuit TP-5 and TP-6 and adjust R725 so that the digital voltmeter output becomes 700mV. (Class A HIGH)
- In the same manner, insert a digital voltmeter between TP-3 and TP-4 and adjust R734 (Class AB), R730 (Class A LOW) and R726 (Class A HIGH) using TP-5, TP-6.

Note: Please carry out adjustments in the order Class AB, then Class A LOW, and finally Class A HIGH.

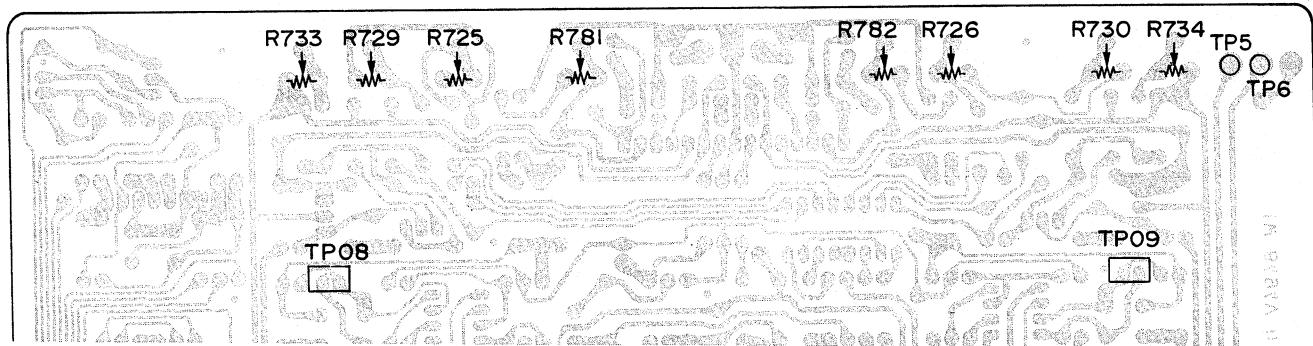
#### 4.2 DC Offset Adjustment

- Set the speaker terminal load in open condition.
- Connect a digital voltmeter to J604-2 and apply 1k ohm across both terminals of TP-8.
- Adjust R781 so that the output of the digital voltmeter becomes 0V.
- In the same manner, adjust JP604-1 using TP-8 and R782.

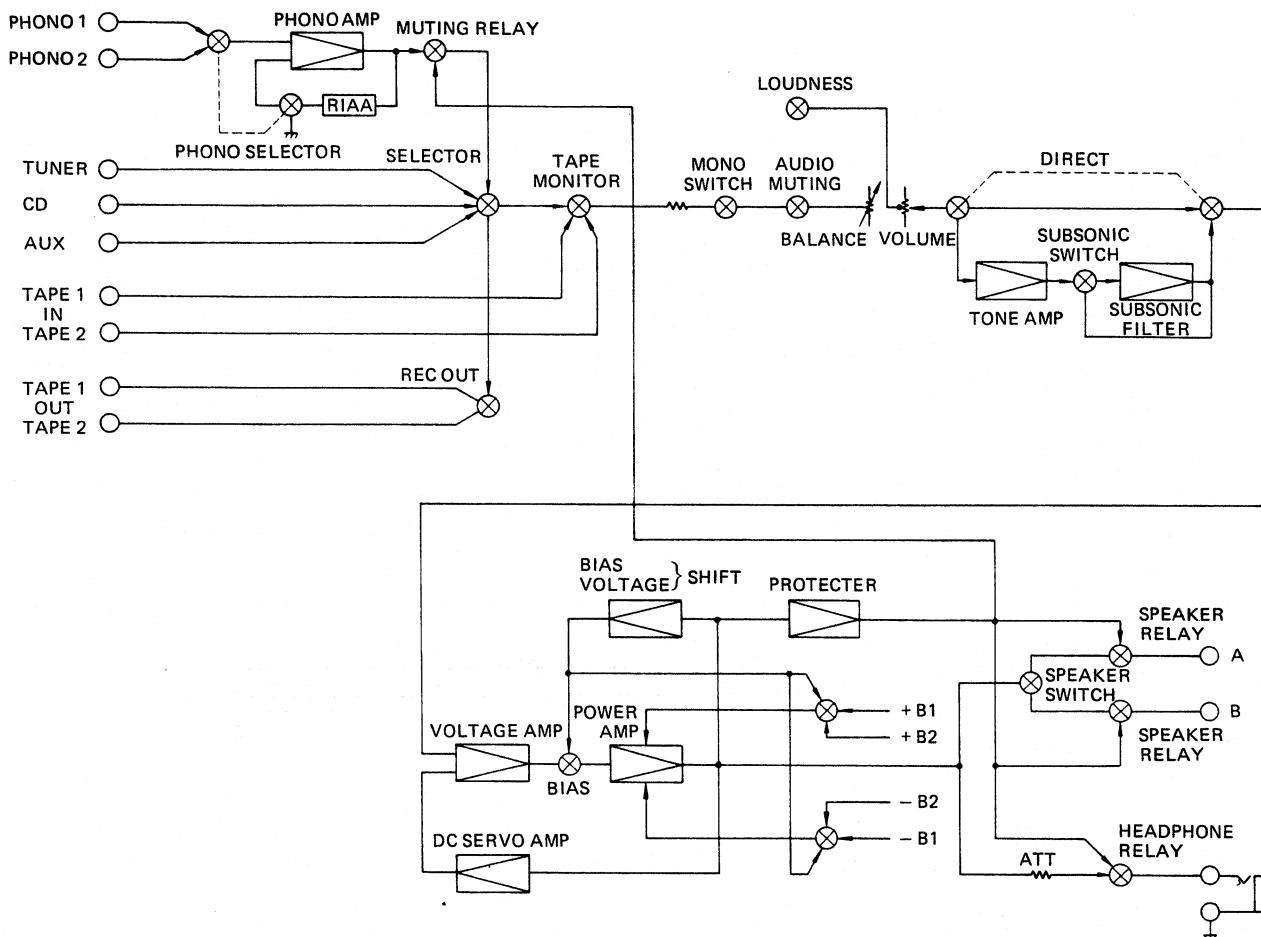
Note: After adjustment, please be sure to disconnect the 1k ohm resistor.

### 5. ADJUSTMENT POINT

P700



## 6. BLOCK DIAGRAM



## 7. VOLTAGE CONVERSION

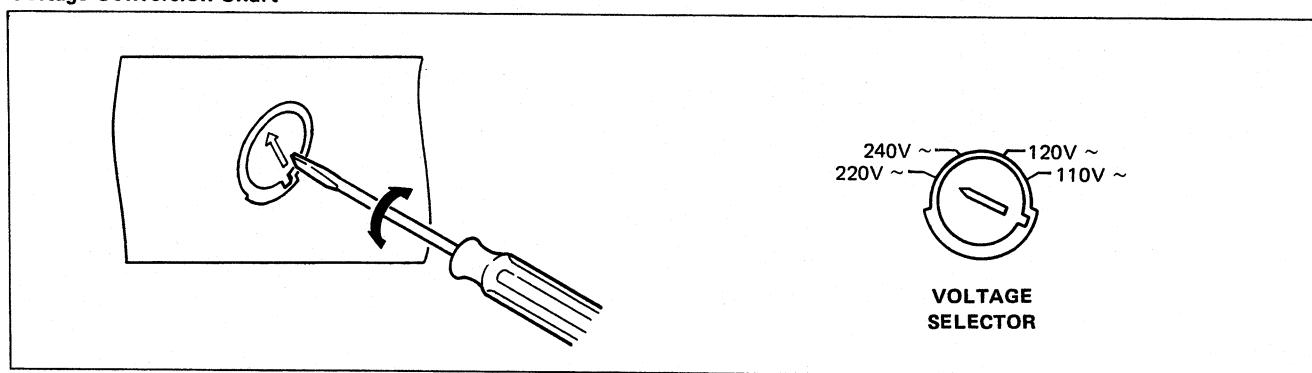
### • EUROPEAN MODEL ONLY

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

### CAUTION

DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart

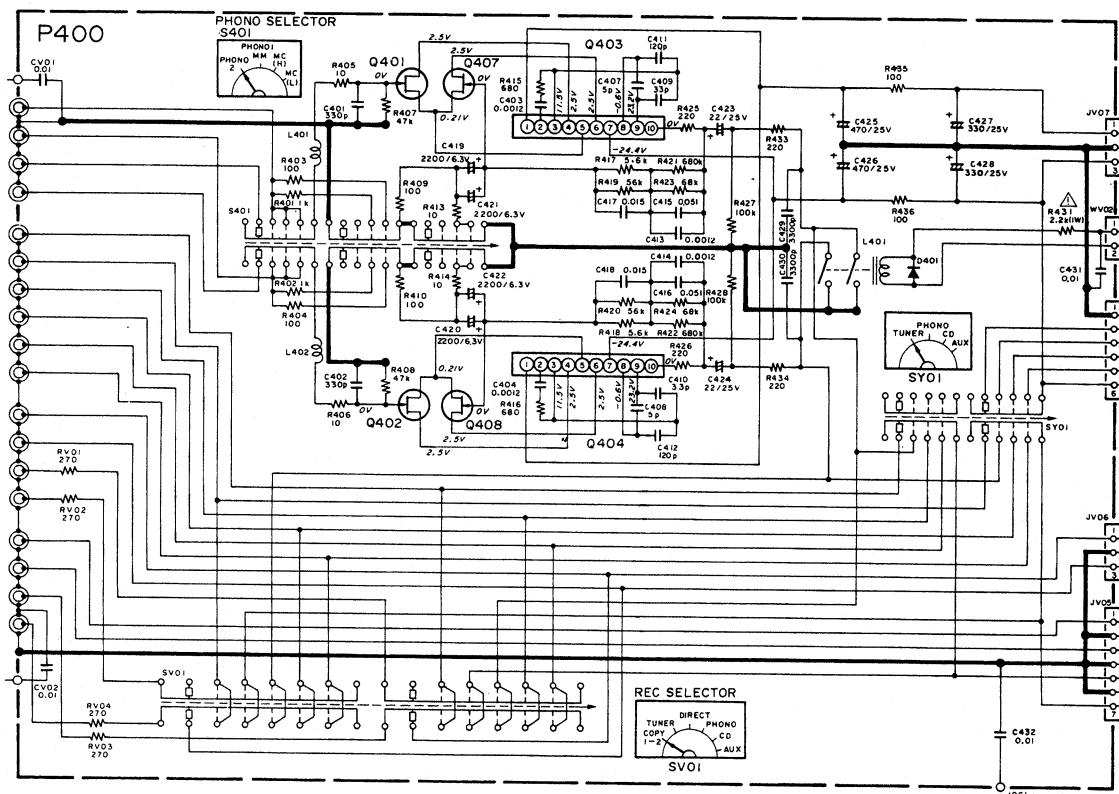


#### Note on safety:

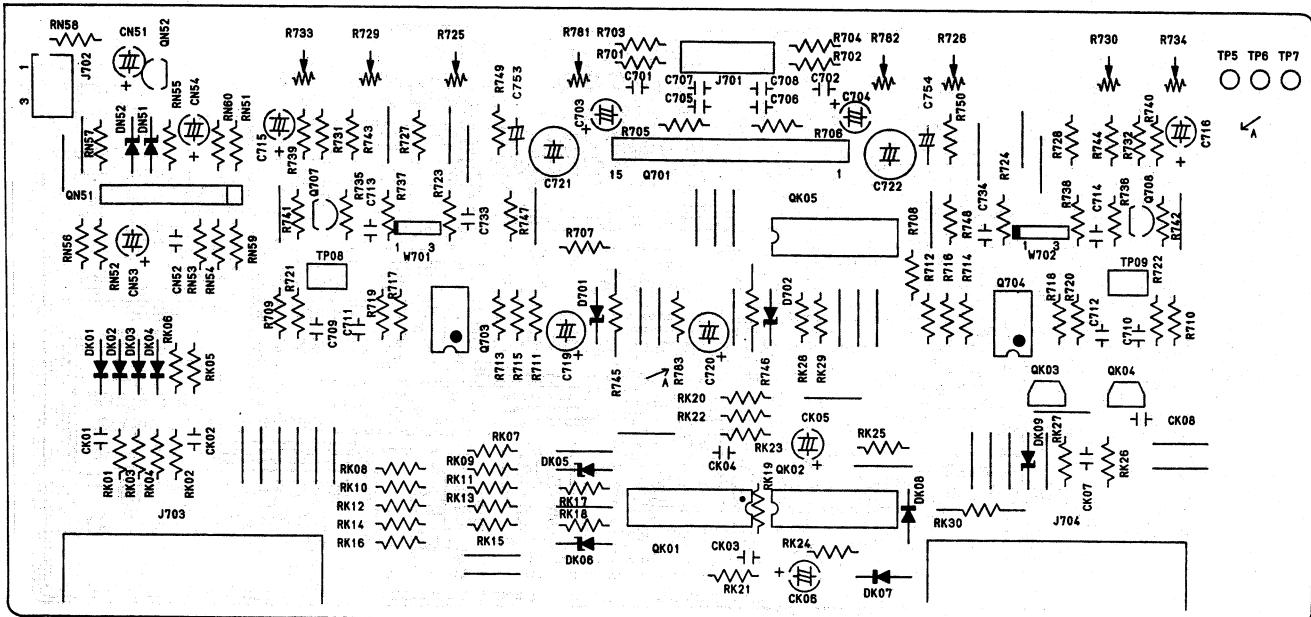
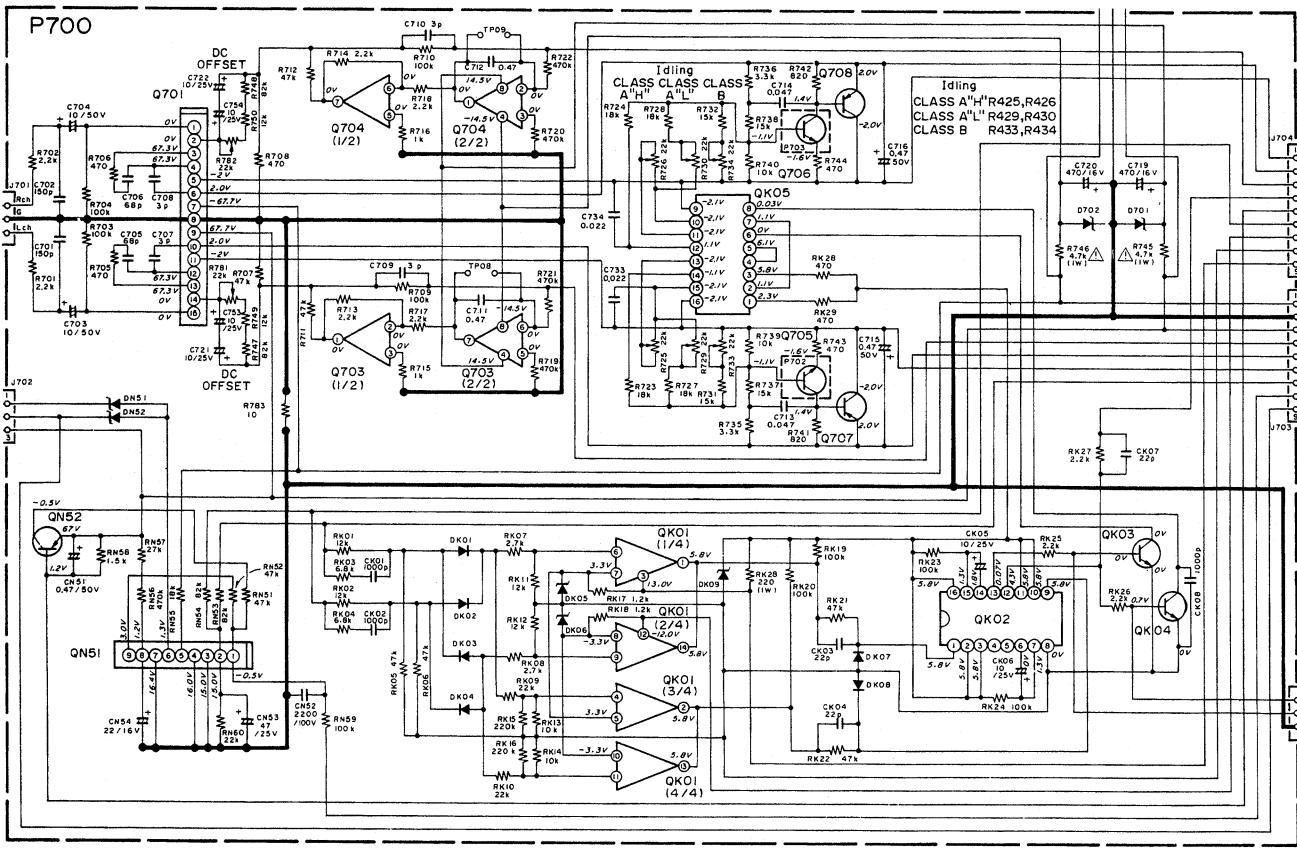
Symbol Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

## 8. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

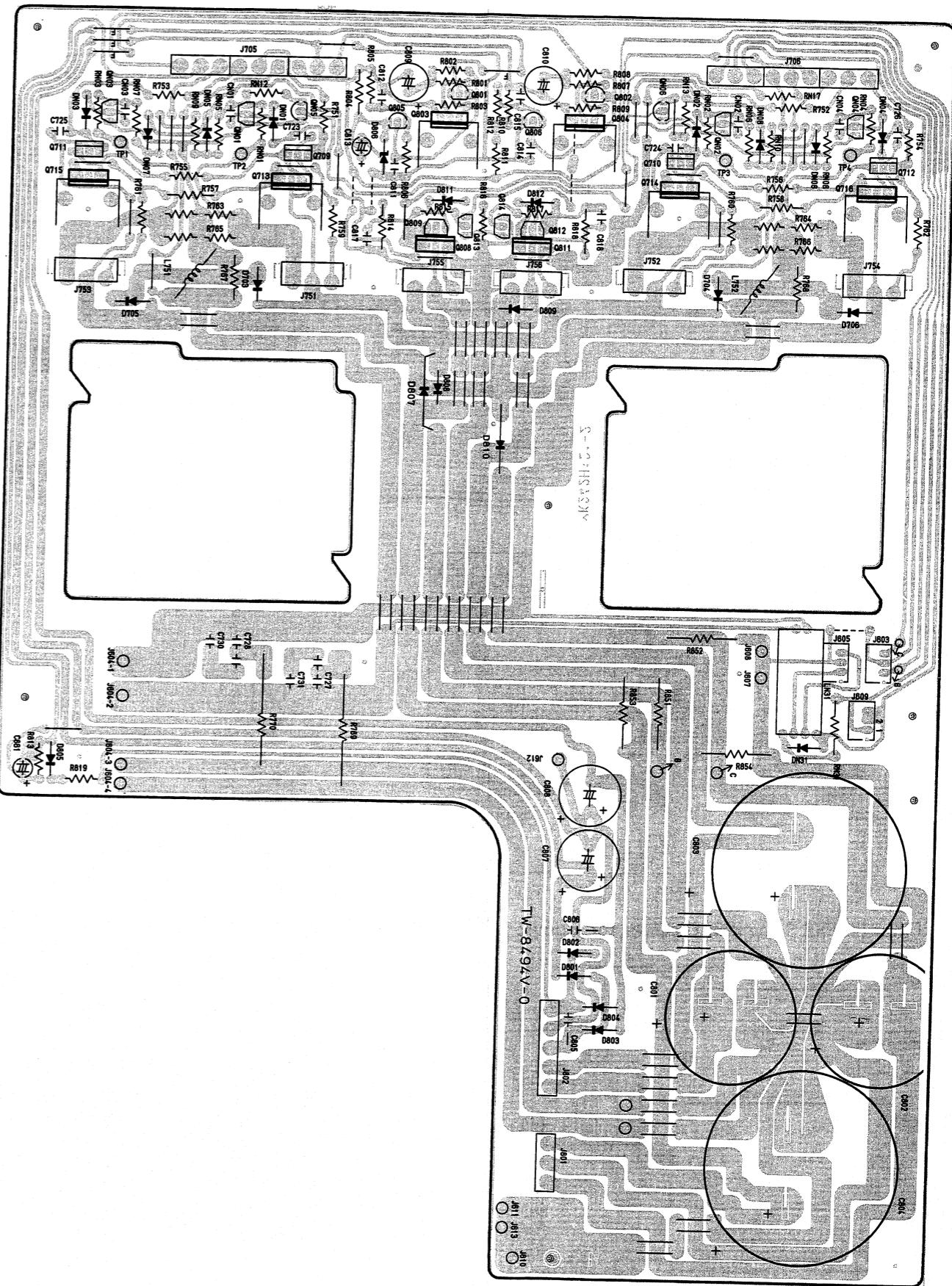
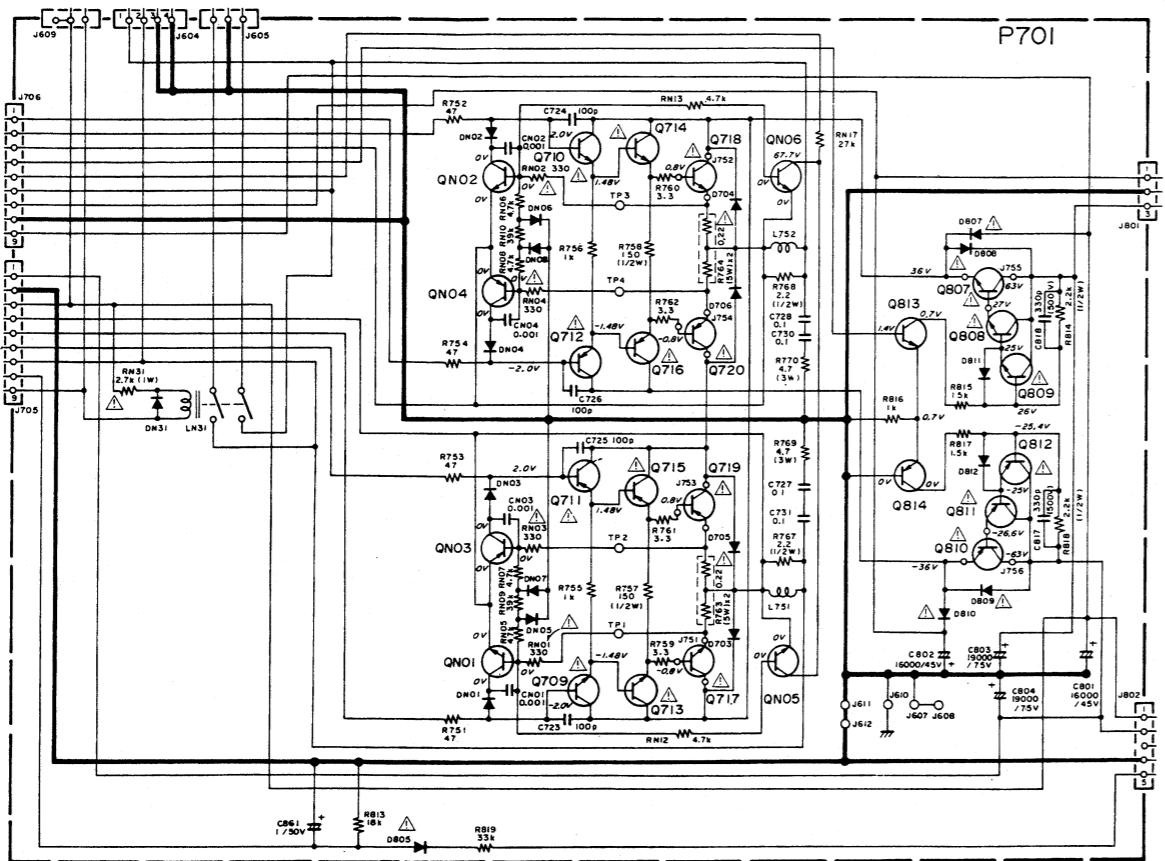
### 8. 1. Phono Amp (P400) Schematic Diagram and Component Locations



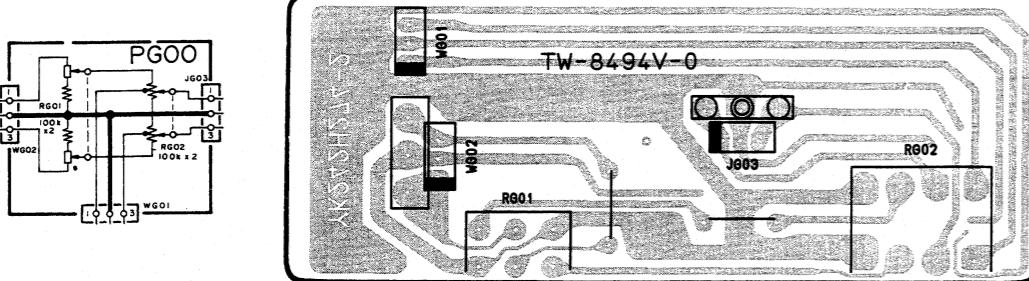
## **8. 2. Voltage Amp (P700) Schematic Diagram and Component Locations**



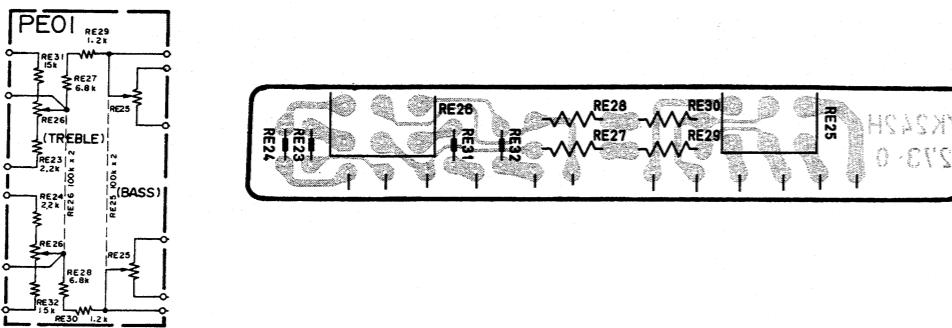
### 8. 3. Main Amp (P701) Schematic Diagram and Component Locations



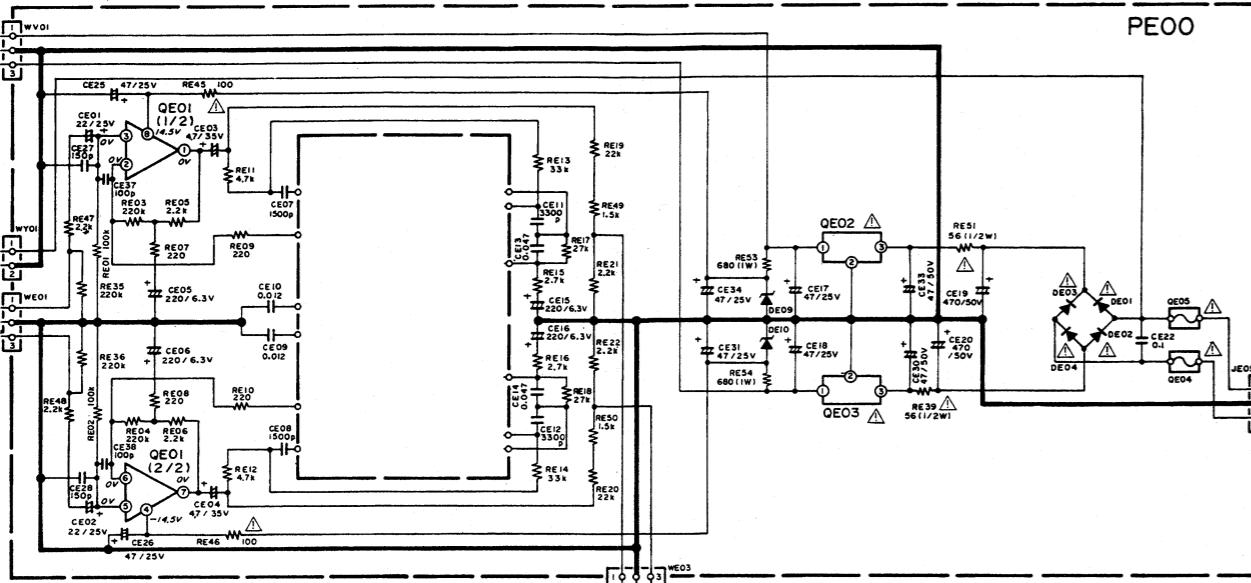
### 8. 4. Volume (PG00) Schematic Diagram and Component Locations



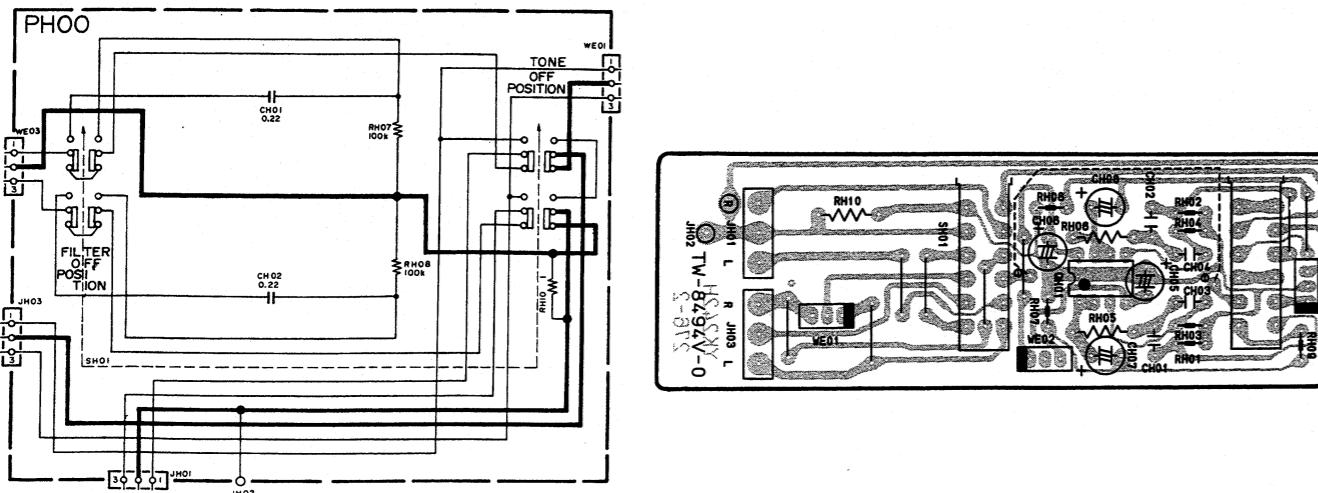
### 8. 5. Tone Volume (PE01) Schematic Diagram and Component Locations



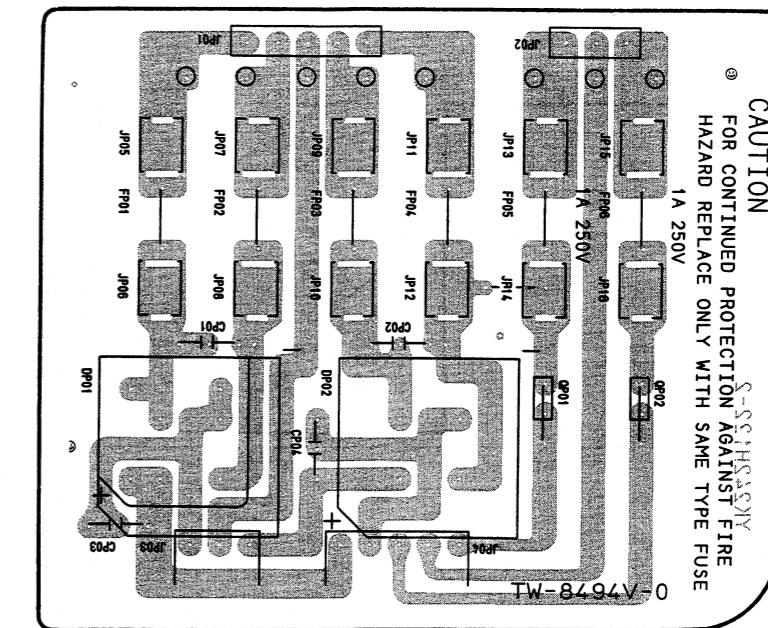
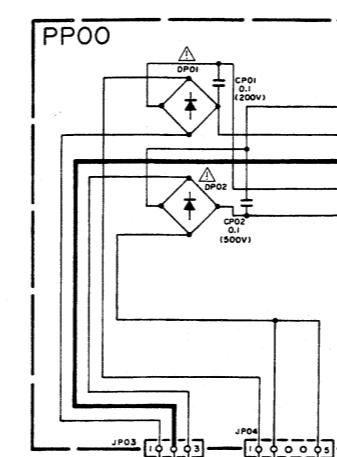
### 8.6. Tone (PE00) Schematic Diagram and Component Locations



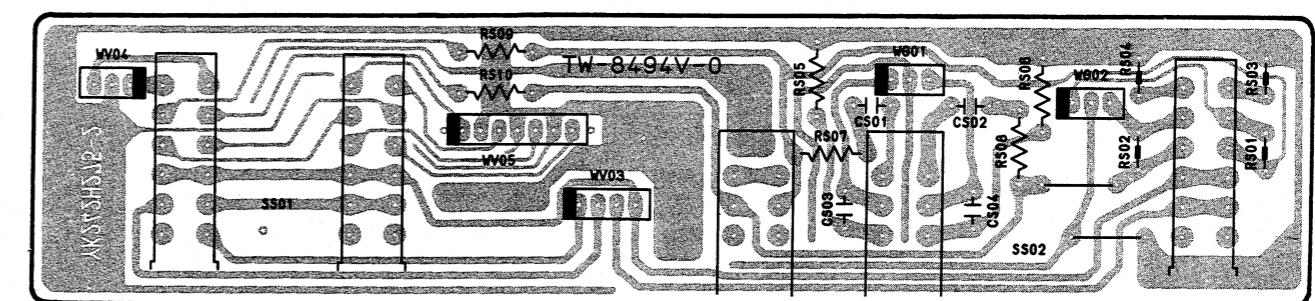
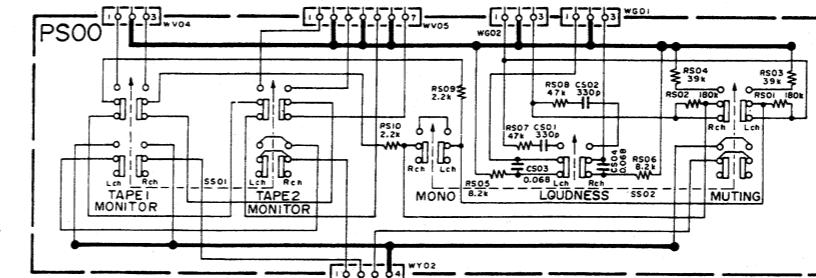
### 8.7. Filter (PH00) Schematic Diagram and Component Locations



### 8.8. Fuse (PP00) Schematic Diagram and Component Locations



### 8.9. Switch (PS00) Schematic Diagram and Component Locations



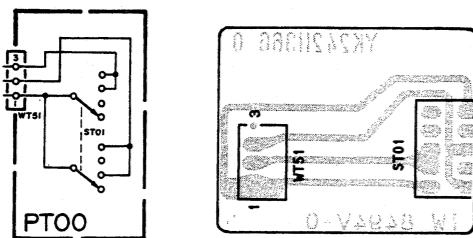
### 8.10. Bias (P702) Schematic Diagram and Component Locations



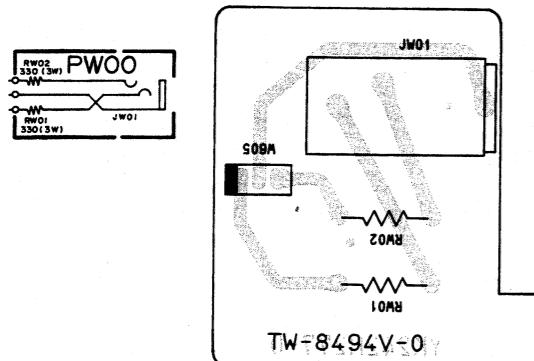
### 8.11. Bias (P703) Schematic Diagram and Component Locations



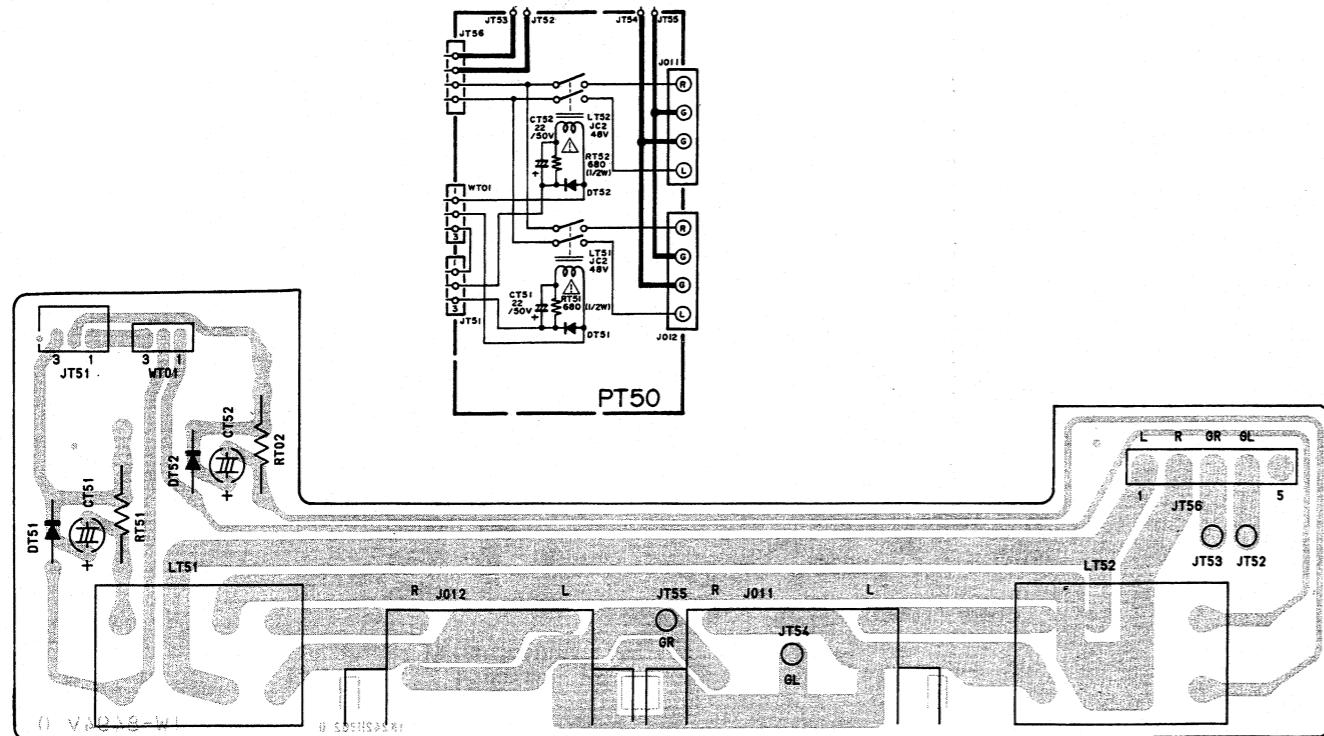
## **8. 12. Speaker Switch (ST00) Schematic Diagram and Component Locations**



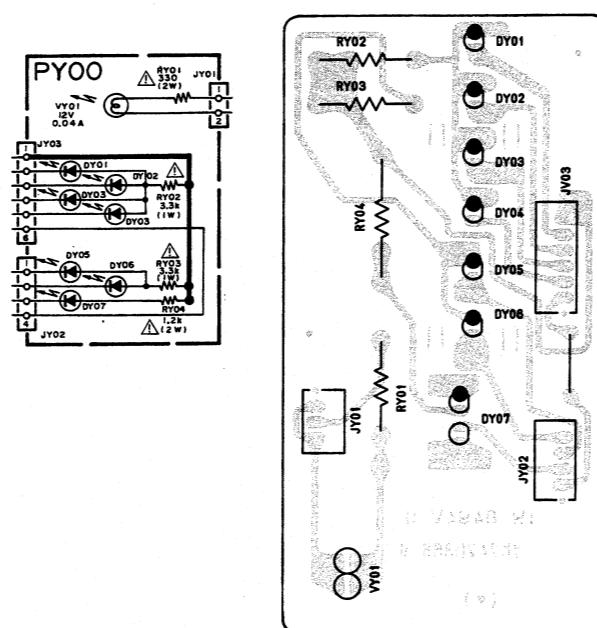
### **8. 13. Headphone Jack (PW00) Schematic Diagram and Component Locations**



## **8. 15. Speaker Terminal (PT50) Schematic Diagram and Component Locations**

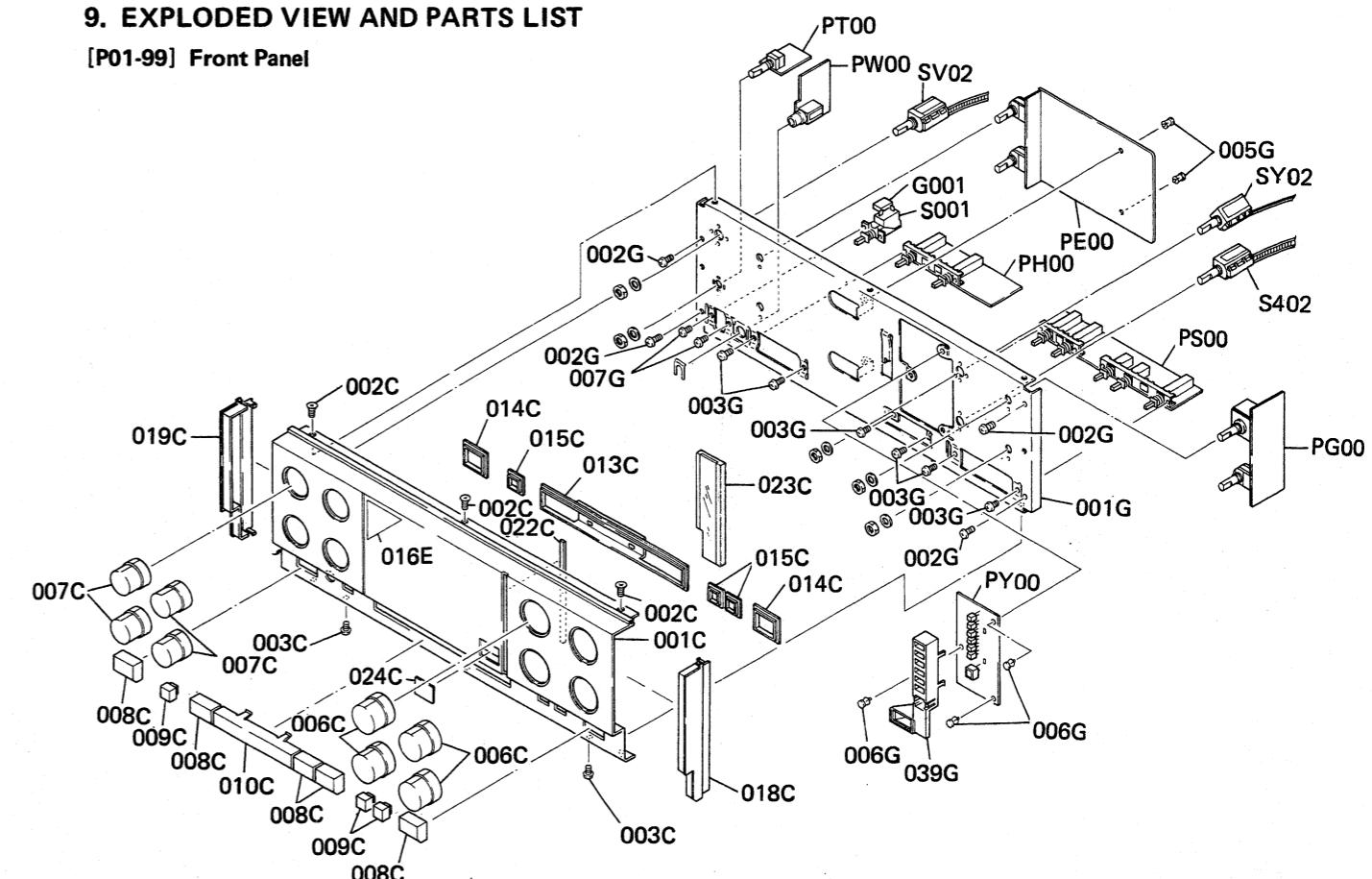


#### **8.-14. Function LED (PY00) Schematic Diagram and Component Locations**



## **9. EXPLODED VIEW AND PARTS LIST**

## [P01-99] Front Panel

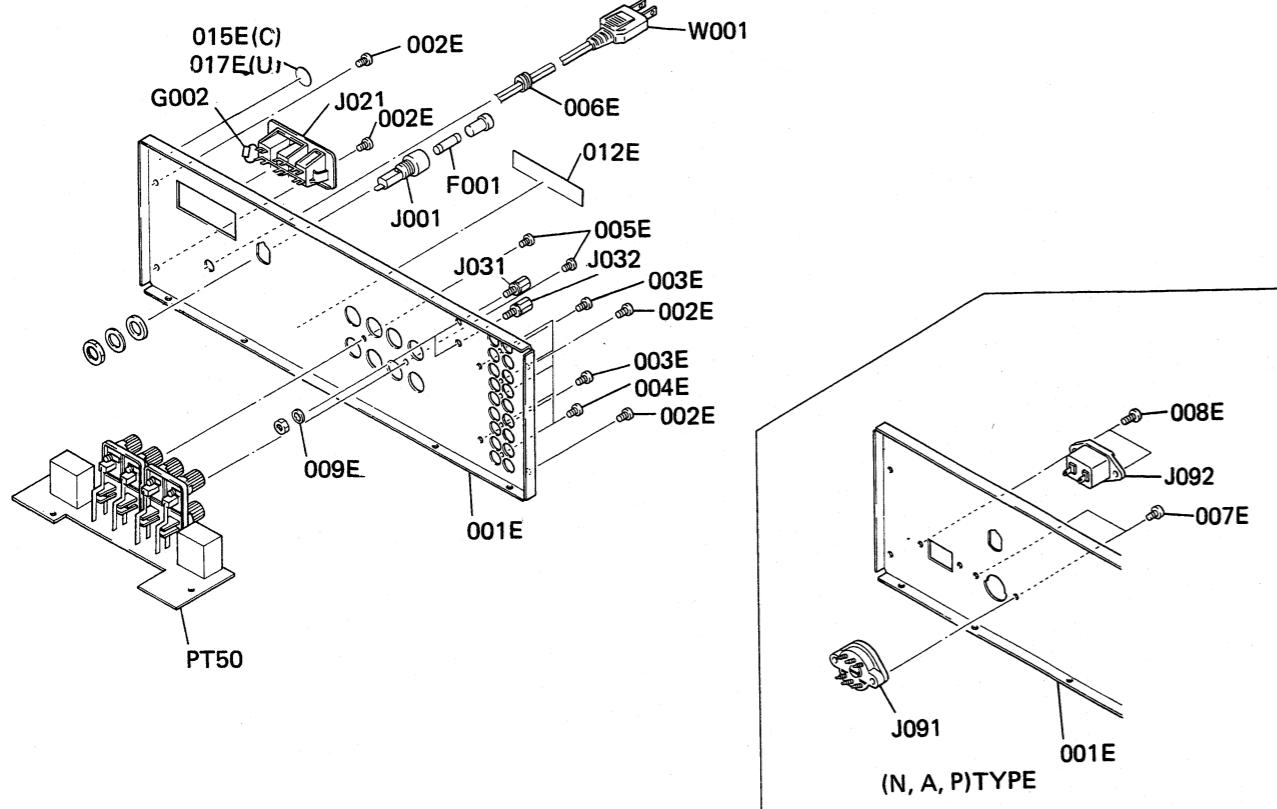


- (U): for U.S.A.
- (A): for Australia
- (N): for Europe
- (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
A	1	1	1	1	242H248400	Front Panel Assembly (Gold)
001C	1	1	1	1	242H248010	Front Panel
010C	1	1	1	1	242H113010	Stud
013C	1	1	1	1	242H259010	Bushing Direct/Tape / Monitor
014C	2	2	2	2	242H259020	Bushing Power/Muting
015C	3	3	3	3	242H259030	Bushing Subsonic/Mono/ Loudest
018C	1	1	1	1	242H067010	Cap Right
019C	1	1	1	1	242H067020	Cap Left
022C	1	1	1	1	242H151010	Introducer
023C	1	1	1	1	242H158010	Window
024C	1	1	1	1	242H151020	Introducer
002C	3	3	3	3	51500308Z0	B.H. Tapped Screw B3 x 8
003C	2	2	2	2	51280308Z0	B.H. Tapped Screw B3 x 8
006C	4	4	4	4	242H154010	Knob (Gold)
007C	4	4	4	4	242H154020	Knob (Gold)
008C	5	5	5	5	242H270010	Button (Gold)
009C	3	3	3	3	242H270020	Button (Gold)

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
016E	1				105H861010	Label 3 Year ESC
001G	1	1	1	1	242H105010	Chassis Front
002G	4	4	4	4	51280308B0	B.H. Tapped Screw B3 x 8
003G	6	6	6	6	51100306A9	B.H.M. Screw B3 x 8
005G	2	2	2	2	2276005050	Clamper
006G	3	3	3	3	2276005050	Clamper
007G	2	2	2	2	51100306Z9	B.H.M. Screw B3 x 8
039G	1	1	1	1	242H051010	L.E.D. Guide
△G001	1	1	1	1	DK18103840	Ceramic -- 0.01μF Spark Killer
△S001	1	1	1	1	SP01010820	Push Switch Power

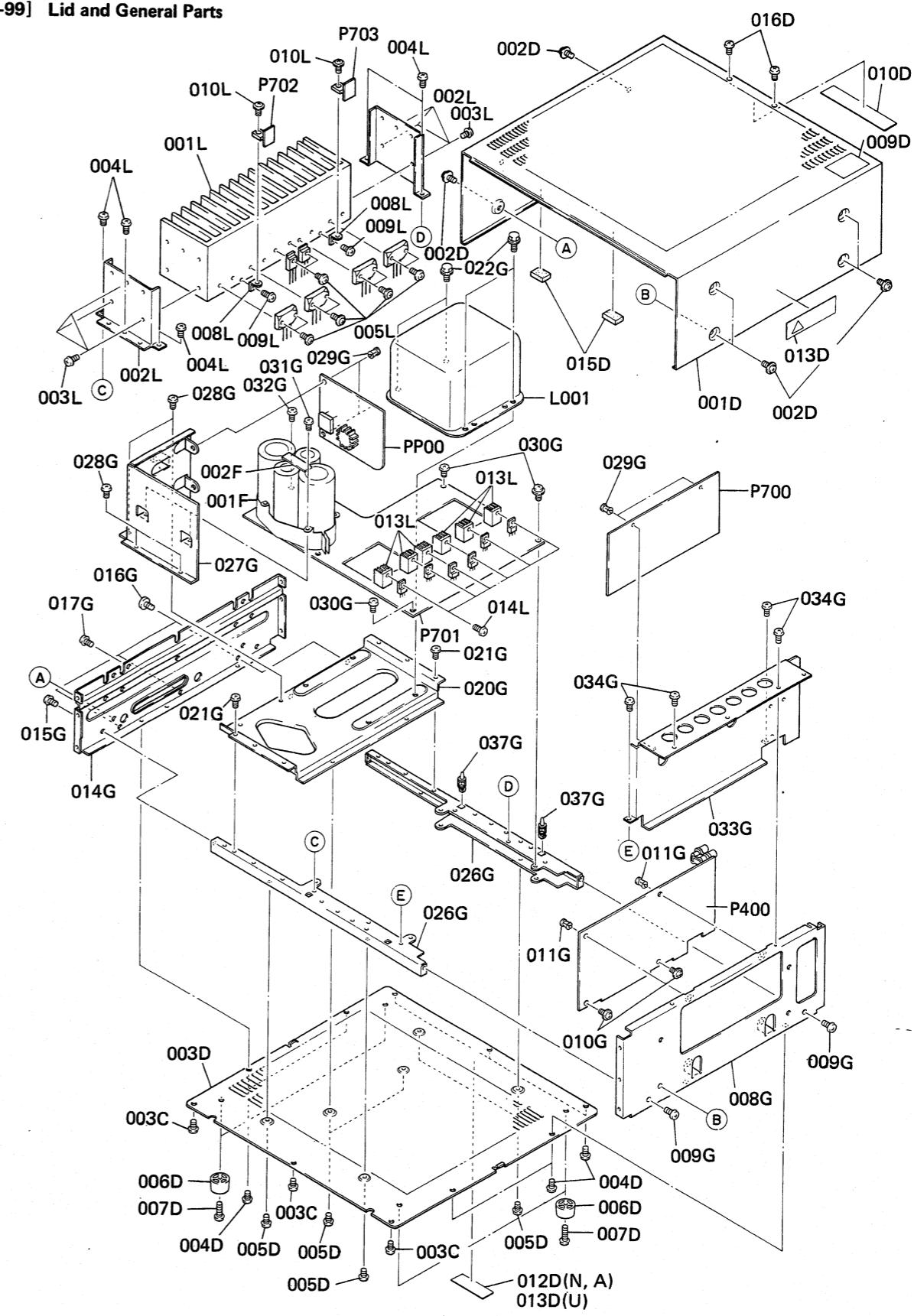
[P02-99] Rear Panel



REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
001E	1				242H250040	Rear Panel
001E	1	1	1	1	242H250020	Rear Panel
001E					242H250030	Rear Panel
002E	4	4	4	4	51280308U0	B.H. Tapped Screw B3 x 8
003E	2	2	2	2	51280308U0	B.H. Tapped Screw B3 x 8
004E	5	5	5	5	51280308U0	B.H. Tapped Screw B3 x 8
005E	2	2	2	2	51280308U0	B.H. Tapped Screw B3 x 8
006E	1				1455259090	Bushing, AC Cord
007E	2	2	2	2	51280308U0	B.H. Tapped Screw B3 x 8
008E	2	2			51280308U0	B.H. Tapped Screw B3 x 8
009E	2	2	2	2	54060400R0	Lug, Ground
012E	1				2112265010	Indicator, Serial No.
012E	1	1	1	1	2112265110	Indicator, Serial No.
015E	1				2457861040	Label, CSA
017E	1				9511101070	Label, UL

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
△F001	1				FS10800500	Fuse 8A
△F001	1	1	1	1	FS10400800	Fuse 4A
△F001					FS10400700	Fuse 4A
△J001	1				YJ08000300	Jack, Fuse Holder
△J001	1	1	1	1	YJ08000290	Jack, Fuse Holder
△J021	1				YJ04001100	Jack, AC Outlet
J092	1	1	1	1	YP04000610	AC Inlet
J031	1	1	1	1	YT01010050	Terminal, Ground
J032	1	1	1	1	YT01010050	Terminal, Ground
△J091	1	1	1	1	BY05080050	Voltage selector
△W001	1				YC02000160	A.C. Power Cord
△W001					YC02400180	A.C. Power Cord

[P03-99] Lid and General Parts

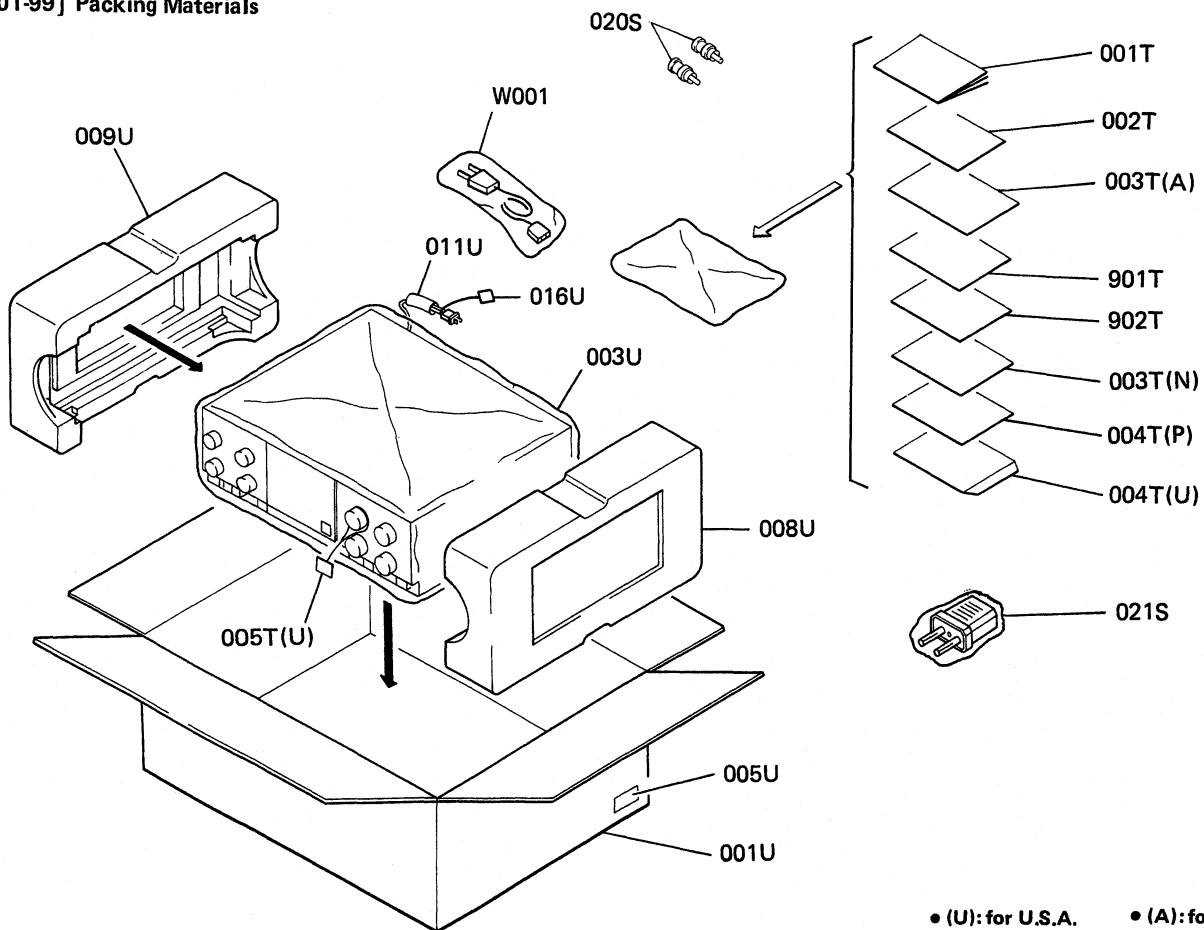


• (U):for U.S.A.      • (A):for Australia  
 • (N):for Europe      • (P):for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
003C	3	3	3	3	51280308BO	B.H. Tapped Screw B3 x 8
001D	1	1	1	1	242H257040	Top Cover (Gold)
002D	8	8	8	8	51260408U0	B.T. Screw B4 x 8
003D	1	1	1	1	242H257020	Bottom Cover
004D	7	7	7	7	51280308B0	B.H. Tapped Screw B3 x 8
005D	6	6	6	6	51280308B0	B.H. Tapped Screw B3 x 8
006D	4	4	4	4	2759057010	Leg
007D	4	4	4	4	51280410B0	B.H. Tapped Screw B4 x 10
009D	1	1	1	1	222H861020	Label
010D	4	4	4	4	2965118010	Spacer
011D	1	1	1	1	2911861140	Label
012D	1	1	1	1	2911861110	Label
013D	2				117H861010	Label UL
015D	2	2	2	2	242H118010	Spacer
016D	2	2	2	2	51280308Z0	B.H. Tapped Screw B3 x 8
001F	1	1	1	1	221H160010	Bracket
002F	1	1	1	1	221H067010	Cap
008G	1	1	1	1	242H105020	Chassis (Right)
009G	2	2	2	2	51280308Z0	B.H. Tapped Screw B3 x 8
010G	2	2	2	2	51260308B0	B.T. Screw B3 x 8
011G	2	2	2	2	2276000050	Clamper
014G	1	1	1	1	242H105030	Chassis (Left)
015G	2	2	2	2	51280308Z0	B.H. Tapped Screw B3 x 8
016G	3	3	3	3	51280408Z0	B.H. Tapped Screw B4 x 8
017G	1	1	1	1	51280308Z0	B.H. Tapped Screw B3 x 8
020G	1	1	1	1	242H105040	Chassis, Trans
021G	6	6	6	6	51280408Z0	B.H. Tapped Screw B4 x 8

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
022G	4	4	4	4	52040408A0	H. Head Bolt
026G	2	2	2	2	242H104010	Retainer
027G	1	1	1	1	242H104020	Retainer
028G	4	4	4	4	51280308Z0	B.H. Tapped Screw B3 x 8
029G	4	4	4	4	2276005050	Clamper
030G	3	3	3	3	51260308Z0	B.T. Screw B3 x 8
031G	3	3	3	3	51280308Z0	B.H. Tapped Screw B3 x 8
032G	1	1	1	1	51260308Z0	B.T. Screw B3 x 8
033G	1	1	1	1	242H109010	Shield
034G	4	4	4	4	51280308Z0	B.H. Tapped Screw B3 x 8
037G	2	2	2	2	3896101010	Support
001L	1	1	1	1	242H267010	Heatsink
002L	2	2	2	2	242H104030	Retainer
003L	6	6	6	6	51280308B0	B.H. Tapped Screw B3 x 8
004L	6	6	6	6	51280308Z0	B.H. Tapped Screw B3 x 8
005L	10	10	10	10	51780312Z0	Fin Neck B.T. Screw B3 x 12
008L	2	2	2	2	2231160040	Bracket
009L	2	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
010L	2	2	2	2	51260308Z0	B.T. Screw B3 x 8
013L	6	6	6	6	238H267010	Heatsink
014L	6	6	6	6	51100308A9	B.H.M. Screw B3 x 8
△ L001	1				TS60508140	Power Transformer
△ L001		1	1	1	TS60508130	Power Transformer

[H01-99] Packing Materials



• (U): for U.S.A.      • (A): for Australia  
 • (N): for Europe      • (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
020S	2	2	2	2	Y001000020	Short Plug
021S			1	1	YJ04000240	Jack
001T	1				242H851210	User Manual
001T	1	1	1	1	242H851310	User Manual
002T	1				242H851220	User Manual
002T	1	1	1	1	242H851320	User Manual
003T	1				103H854010	User Manual Spec
003T	1	1			242H856010	Warranty Card
003T		1			9631000090	Circuit Diagram
004T	1				2225813010	Warranty Card
004T				1	3435851210	Envelope
						User Manual Flysheet
005T	1				9560000100	Hang Tag
901T	1				9650000050	Service Station Card (Canada)
902T	1				101K854210	Warranty Card (Canada)

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
001U	1				242H801030	Packing Case
001U		1	1		242H801010	Packing Case
001U				1	242H801020	Packing Case
003U	1	1	1	1	9091111030	Polyethy Sheet
005U	1				9526019010	Serial NO Card
005U		1			9526019060	Serial NO Card
005U			1		9526019030	Serial NO Card
005U				1	9526019050	Serial NO Card
008U	1	1	1	1	242H809010	Cushion (R)
009U	1	1	1	1	242H809020	Cushion (L)
011U	1			1	2864804010	Sleeve, AC Cord
016U	1	1	1	1	242H863020	Hang Tag
△W001			1		ZC01805030	AC Power Cord
△W001				1	ZC02006030	AC Power Cord

## 10. ELECTRICAL PART LIST

• (U): for U.S.A.      • (A): for Australia  
 • (N): for Europe      • (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION	REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P				U	N	A	P		
P400	1	1	1	1	YK242H2710	P400-PHONO SELECTOR CIRCUIT BOARD	R413	1	1	1	1	GD05100140	10Ω
	1	1	1	1	ZZ242H2710	P.W. Board Phono Amp	R414	1	1	1	1	GD05100140	10Ω
						P.W. Board Assembly	R415	1	1	1	1	GD05681140	680Ω
C401	1	1	1	1	DD15331370	P400-CAPACTORS	R416	1	1	1	1	GD05681140	680Ω
C402	1	1	1	1	DD15331370	Ceramic 330pF ±5%	R417	1	1	1	1	GD05562140	5.6kΩ
C403	1	1	1	1	DF15122310	Ceramic 330pF ±5%	R418	1	1	1	1	GD05562140	5.6kΩ
C404	1	1	1	1	DF15122310	Film 1200pF ±5%	R419	1	1	1	1	GD05563140	56kΩ
C407	1	1	1	1	DD10050370	Film 1200pF ±5%	R420	1	1	1	1	GD05563140	56kΩ
C408	1	1	1	1	DD10050370	Ceramic 5pF ±0.5pF	R421	1	1	1	1	GD05684140	680kΩ
C409	1	1	1	1	DD10050370	Ceramic 5pF ±0.5pF	R422	1	1	1	1	GD05684140	680kΩ
C410	1	1	1	1	DD10050370	Ceramic 5pF ±0.5pF	R423	1	1	1	1	GD05683140	68kΩ
C411	1	1	1	1	DD15121370	Ceramic 5pF ±0.5pF	R424	1	1	1	1	GD05683140	68kΩ
C412	1	1	1	1	DD15121370	Ceramic 120pF ±5%	R425	1	1	1	1	GD05221140	220Ω
						Ceramic 120pF ±5%	R426	1	1	1	1	GD05221140	220Ω
C413	1	1	1	1	DF15122310	Film 1200pF ±5%	R427	1	1	1	1	GD05104140	100kΩ
C414	1	1	1	1	DF15122310	Film 1200pF ±5%	R428	1	1	1	1	GD05104140	100kΩ
C415	1	1	1	1	DF74513030	Film 0.051μF ±2%	▲R431	1	1	1	1	GA05222010	2.2kΩ 1W
C416	1	1	1	1	DF74513030	Film 0.051μF ±2%	R433	1	1	1	1	GD05221140	220Ω
C417	1	1	1	1	DF74513030	Film 0.015μF ±2%	R434	1	1	1	1	GD05221140	220Ω
C418	1	1	1	1	DF74513030	Film 0.015μF ±2%	R435	1	1	1	1	RF05101140	100Ω
C419	1	1	1	1	EA22800630	Elect 2200μF 6.3V	R436	1	1	1	1	RF05101140	100Ω
C420	1	1	1	1	EA22800630	Elect 2200μF 6.3V	RV01	~	4	4	4	GD05271140	270Ω
C421	1	1	1	1	EA22800630	Elect 2200μF 6.3V	RV04						
C422	1	1	1	1	EA22800630	Elect 2200μF 6.3V	D401	1	1	1	1	HD20014010	P400-SEMICONDUCTORS
C423	1	1	1	1	EA10602530	Diode 1S2471	Q401	1	1	1	1	HF203691G0	F.E.T. 2SK369(GR)
C424	1	1	1	1	EA10602530	Elect 10μF 25V	Q402	1	1	1	1	HF203691G0	F.E.T. 2SK369(GR)
C425	1	1	1	1	EA47702530	Elect 470μF 25V	Q403	1	1	1	1	HC10028090	IC NJM2037
C426	1	1	1	1	EA47702530	Elect 470μF 25V	Q404	1	1	1	1	HC10028090	IC NJM2037
C427	1	1	1	1	EA33702530	Elect 330μF 25V	JV01	1	1	1	1	YT02040480	P400-MISCELLANEOUS
C428	1	1	1	1	EA33702530	Elect 330μF 25V	JV02	1	1	1	1	YT02060180	Terminal Phone 1.2
C429	1	1	1	1	DF15332350	Film 3300pF ±5%	JV03	1	1	1	1	YT02040470	Terminal Tuner CD Aux
C430	1	1	1	1	DF15332350	Film 3300pF ±5%	JV04	1	1	1	1	YT02040470	Terminal Tape 1 In/out
C431	1	1	1	1	DF15103550	Film 0.01μF ±5%	JV05	1	1	1	1	YJ06002460	Terminal Tape 2 In/out
C432	1	1	1	1	DK18103300	Ceramic 0.01μF +80% -20%	JV06	1	1	1	1	YJ06002430	Jack (7P)
CV01	1	1	1	1	DK18103310	Ceramic 0.01μF +80% -20%	JV07	1	1	1	1	YJ06002430	Jack (3P)
CV02	1	1	1	1	DK18103310	Ceramic 0.01μF +80% -20%	WV02	1	1	1	1	YU02380260	Jack (3P)
						P400-RESISTORS	WV03	1	1	1	1	YU06240260	Jumper Lead
						(All Resistors are ±5% & 1/4W)	WV04	1	1	1	1	YU03300260	Jumper Lead
R401	1	1	1	1	GD05102140	1kΩ	WV05	1	1	1	1	YU04260260	Jumper Lead
R401	1	1	1	1	GD05102140	1kΩ	L401	1	1	1	1	LY20420230	Relay SZ-2104
R403	1	1	1	1	GD05101140	100Ω	SV01	1	1	1	1	SS04060020	Side Switch Tape Out Selector
R404	1	1	1	1	GD05101140	100Ω	SY01	1	1	1	1	SS04040100	Slide Switch Function
R405	1	1	1	1	GD05100140	10Ω	S401	1	1	1	1	SS06040040	Slide Switch Phono Selector
R406	1	1	1	1	GD05100140	10Ω							
R407	1	1	1	1	GD05473140	47kΩ							
R408	1	1	1	1	GD05473140	47kΩ							
R409	1	1	1	1	GD05101140	100Ω							
R410	1	1	1	1	GD05101140	100Ω							

• (U): for U.S.A.     • (A): for Australia  
 • (N): for Europe     • (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION	REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P				U	N	A	P		
PE00	1	1	1	1	YK242H2720	PE00-TONE AMP CIRCUIT BOARD	RE11	1	1	1	1	GD05472140	4.7kΩ
	1	1	1	1	ZZ242H2720	P.W. Board, Tone Amp	RE12	1	1	1	1	GD05472140	4.7kΩ
					ZZ242H8720	P.W. Board Assembly	RE13	1	1	1	1	GD05333140	33kΩ
					ZZ242H7720	P.W. Board Assembly	RE14	1	1	1	1	GD05333140	33kΩ
						PE00-CAPACITORS	RE15	1	1	1	1	GD05272140	2.7kΩ
CE01	1	1	1	1	EA22602530	Elect 22μF 25V	RE16	1	1	1	1	GD05272140	2.7kΩ
CE02	1	1	1	1	EA22602530	Elect 22μF 25V	RE17	1	1	1	1	GD05273140	2.7kΩ
CE03	1	1	1	1	EA47503530	Elect 4.7μF 35V	RE18	1	1	1	1	GD05273140	27kΩ
CE04	1	1	1	1	EA47503530	Elect 4.7μF 35V	RE19	1	1	1	1	GD05223140	22kΩ
CE05	1	1	1	1	EA22700630	Elect 220μF 6.3V	RE20	1	1	1	1	GD05223140	22kΩ
CE06	1	1	1	1	EA22700630	Elect 220μF 6.3V	RE21	1	1	1	1	GD05222140	2.2kΩ
CE07	1	1	1	1	DF15152310	Film 1500pF ±5%	RE22	1	1	1	1	GD05222140	2.2kΩ
CE08	1	1	1	1	DF15152310	Film 1500pF ±5%	RE35	1	1	1	1	GD05224140	220kΩ
CE09	1	1	1	1	DF15123310	Film 0.012μF ±5%	RE36	1	1	1	1	GD05224140	220kΩ
CE10	1	1	1	1	DF15123310	Film 0.012μF ±5%	△ RE39	1	1	1	1	RF05560120	Fusible 56Ω ½W
CE11	1	1	1	1	DF15332310	Film 3300pF ±5%	RE43	1	1	1	1	GG05101140	100Ω
CE12	1	1	1	1	DF15332310	Film 3300pF ±5%	RE44	1	1	1	1	GG05101140	100Ω
CE13	1	1	1	1	DF15473310	Film 0.047μF ±5%	RE45	1	1	1	1	GG05101140	100Ω
CE14	1	1	1	1	DF15473310	Film 0.047μF ±5%	RE47	1	1	1	1	GD05222140	2.2kΩ
CE15	1	1	1	1	EA22700630	Elect 220μF 6.3V	RE48	1	1	1	1	GD05222140	2.2kΩ
CE16	1	1	1	1	EA22700630	Elect 220μF 6.3V	RE49	1	1	1	1	GD05152140	1.5kΩ
CE17	1	1	1	1	EA47602530	Elect 47μF 25V	RE50	1	1	1	1	GD05152140	1.5kΩ
CE18	1	1	1	1	EA47602530	Elect 47μF 25V	△ RE51	1	1	1	1	RF05560120	Fusible 56Ω ½W
CE19	1	1	1	1	EA47705030	Elect 470μF 50V	RE53	1	1	1	1	GA05681010	680Ω 1W
CE20	1	1	1	1	EA47705030	Elect 470μF 50V	RE54	1	1	1	1	GA05681010	680Ω 1W
CE22	1	1	1	1	DK16103550	Ceramic 0.1μF ±10%	PE00-SEMICONDUCTORS						
CE25	1	1	1	1	DK18153300	Ceramic 0.015μF +80% -20%	△ DE01	1	1	1	1	HD20022030	Diode DSF10C
CE26	1	1	1	1	DK18153300	Ceramic 0.015μF +80% -20%	△ DE02	1	1	1	1	HD20022030	Diode DSF10C
CE27	1	1	1	1	DD15151370	Ceramic 150pF ±5%	△ DE03	1	1	1	1	HD20022030	Diode DSF10C
CE28	1	1	1	1	DD15151370	Ceramic 150pF ±5%	△ DE04	1	1	1	1	HD20022030	Diode DSF10C
CE30	1	1	1	1	EA47605030	Elect 47μF 50V	DE09	1	1	1	1	HD30013010	Zener HZ15L-2
CE31	1	1	1	1	EA47602530	Elect 47μF 25V	DE10	1	1	1	1	HD30013010	Zener HZ15L-2
CE33	1	1	1	1	EA47605030	Elect 47μF 50V	QE01	1	1	1	1	HC10021090	IC NJM4560D-D
CE34	1	1	1	1	EA47602530	Elect 47μF 25V	QE02	1	1	1	1	HC38524090	IC NJM78M24
CE37	1	1	1	1	DD15101300	Ceramic 100pF ±5%	QE03	1	1	1	1	HC39524090	IC NJM79M24
CE38	1	1	1	1	DD15101300	Ceramic 100pF ±5%	QE04	1	1	1	1	FU80115010	Protector Unit ICP-F20
						PE00-RESISTORS (All Resistors are ±5% & ½W)	QE05	1	1	1	1	FU80115010	Protector Unit ICP-F20
RE01	1	1	1	1	GD05104140	100kΩ	△ FE01	1				FS10100500	PE00-MISCELLANEOUS
RE02	1	1	1	1	GD05104140	100kΩ	△ FE01		1			FS10100800	Fuse 1A 250V
RE03	1	1	1	1	GD05224140	220kΩ	△ FE01			1		FS10100600	Fuse 1A 250V
RE04	1	1	1	1	GD05224140	220kΩ	△ FE02	1	1			FS10100500	Fuse 1A 250V
RE05	1	1	1	1	GD05222140	2.2kΩ	JE05	1	1	1	1	YP06001040	Plug (3P)
RE06	1	1	1	1	GD05222140	2.2kΩ	JE06	1	1	1	1	YJ06001240	Jack (3P)
RE07	1	1	1	1	GD05222140	220Ω	WE01	1	1	1	1	YU03160260	Jumper Lead
RE08	1	1	1	1	GD05222140	220Ω	WE02	1	1	1	1	YU03140260	Jumper Lead
RE09	1	1	1	1	GD05222140	220Ω	WE03	1	1	1	1	YU03180260	Jumper Lead
RE10	1	1	1	1	GD05222140	220Ω	WV01	1	1	1	1	YU03400260	Jumper Lead
							WY01	1	1	1	1	YU02120260	Jumper Lead

• (U): for U.S.A.      • (A): for Australia  
 • (N): for Europe      • (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION	REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P				U	N	A	P		
PE01	1	1	1	1	YK242H2730	PE01-TONE VOLUME CIRCUIT BOARD	△DP01	1	1	1	1	HE20009290	PP00-SEMICONDUCTORS
	1	1	1	1	ZZ242H2730	P.W. Board, Tone Volume P.W. Board Assembly	△DP02	1	1	1	1	HE20013290	Diode S5VB20 Diode D5FB20
RE23	1	1	1	1	GD05222140	PE01-RESISTORS	JP03	1	1	1	1	YJ06001240	PP00-MISCELLANEOUS
RE24	1	1	1	1	GD05222140	2.2kΩ	JP04	1	1	1	1	YJ06001250	2.2kΩ
RE25	1	1	1	1	RM01040780	Variable 100kΩ	PS00	1	1	1	1	YK242H2750	PS00-SWITCH
RE26	1	1	1	1	RM01040780	Variable 100kΩ		1	1	1	1	ZZ242H2750	CIRCUIT BOARD
RE27	1	1	1	1	GD05682140	6.8kΩ						P.W. Board, Switch	
RE28	1	1	1	1	GD05682140	6.8kΩ						P.W. Board Assembly	
RE29	1	1	1	1	GD05122140	1.2kΩ	CS01	1	1	1	1	DD15331370	PS00-CAPACITORS
RE30	1	1	1	1	GD05122140	1.2kΩ	CS02	1	1	1	1	DD15331370	Ceramic 330pF ±5%
RE31	1	1	1	1	GD05153140	15kΩ	CS03	1	1	1	1	DF15683310	Ceramic 330pF ±5%
RE32	1	1	1	1	GD05153140	15kΩ	CS04	1	1	1	1	DF15683310	Film 0.068μF ±5%
						PG00-VOLUME CIRCUIT BOARD						Film 0.068μF ±5%	
PG00	1	1	1	1	YK242H2740	P.W. Board, Volume						PS00-RESISTORS	
	1	1	1	1	ZZ242H2740	P.W. Board Assembly						(All Resistors are ±5% & 1/4W)	
RG01	1	1	1	1	RM01040770	PG00-RESISTORS	RS01	1	1	1	1	GD05184140	180kΩ
RG02	1	1	1	1	RM01040790	Variable 100kΩ	RS02	1	1	1	1	GD05184140	180kΩ
						Variable 100kΩ	RS03	1	1	1	1	GD05393140	39kΩ
JG03	1	1	1	1	YP06001040	PG00-MISCELLANEOUS	RS04	1	1	1	1	GD05393140	39kΩ
						Plug (3P)	RS05	1	1	1	1	GD05822140	8.2kΩ
WG01	1	1	1	1	YU03140260	WG01	RS06	1	1	1	1	GD05822140	8.2kΩ
WG02	1	1	1	1	YU03140260	Jumper Lead	RS07	1	1	1	1	GD05473140	47kΩ
						Jumper Lead	RS08	1	1	1	1	GD05473140	47kΩ
PH00	1	1	1	1	YK242H2760	PH00-FILTER CIRCUIT BOARD	RS09	1	1	1	1	GD05222140	2.2kΩ
	1	1	1	1	ZZ242H2760	P.W. Board, Filter	RS10	1	1	1	1	GD05222140	2.2kΩ
						P.W. Board Assembly						PS00-MISCELLANEOUS	
CH01	1	1	1	1	DF15224350	PH00-CAPACITORS	SS01	1	1	1	1	SP04020420	Push Switch Tape Monitor 1-2
CH02	1	1	1	1	DF15224350	Film 0.22μF ±5%	SS02	1	1	1	1	SP04030300	Push Switch Mono/Loud Muting
						Film 0.22μF ±5%	WY02	1	1	1	1	YU04120260	Jumper Lead
RH07	1	1	1	1	GD05104140	PH00-RESISTORS	PT00	1	1	1	1	YK242H3660	PT00-SPEAKER SWITCH CIRCUIT BOARD
RH08	1	1	1	1	GD05104140	(All Resistors are ±5% & 1/4W)		1	1	1	1	ZZ242H3660	P.W. Board Speaker Switch
RH10	1	1	1	1	GD05010140	100kΩ						P.W. Board Assembly	
						100kΩ	ST01	1	1	1	1	SR02040170	PT00-MISCELLANEOUS
JH01	1	1	1	1	YP06001040	PH00-MISCELLANEOUS	WT51	1	1	1	1	YU03680260	Rotary Switch Speaker
JH03	1	1	1	1	YP06001040	Plug (3P)						Jumper Lead	
						Plug (3P)	PT50	1	1	1	1	YK242H3620	PT50-SPEAKER TERMINAL CIRCUIT BOARD
SH01	1	1	1	1	SP04020410	Push Switch		1	1	1	1	ZZ242H3620	P.W. Board Speaker Terminal
												P.W. Board Assembly	
PP00	1	1	1	1	YK242H1220	PP00-FUSE CIRCUIT BOARD	PT50	1	1	1	1	YK242H3620	PT50-CAPACITORS
	1	1	1	1	ZZ242H1220	P.W. Board, Fuse	CT51	1	1	1	1	EA22605030	Elect 22μF 50V
	1	1	1	1	ZZ242H8220	P.W. Board Assembly	CT52	1	1	1	1	EA22605030	Elect 22μF 50V
					ZZ242H7220	P.W. Board Assembly						PT50-RESISTORS	
CP01	1	1	1	1	DF16103550	CP01	△RT51	1	1	1	1	GG05681120	(All Resistors are ±5% & 1/4W)
CP02	1	1	1	1	DF16103550	Film 0.01μF ±10%	△RT52	1	1	1	1	GG05681120	680Ω
						Film 0.01μF ±10%						680Ω	

• (U): for U.S.A.  
• (N): for Europe

• (A): for Australia  
• (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
DT51	1	1	1	1	HD20014010	<b>PT50-SEMICONDUCTORS</b>
DT52	1	1	1	1	HD20014010	Diode 1S2471
JT51	1	1	1	1	YJ06002430	Jack (3P)
JT56	1	1	1	1	YP06001050	Plug (4P)
J011	1	1	1	1	YT01040330	Terminal, System A
J012	1	1	1	1	YT01040330	Terminal, System B
LT51	1	1	1	1	LY20480060	Relay
LT52	1	1	1	1	LY20480060	Relay
WT01	1	1	1	1	YU03120260	Jumper Lead
<b>PW00-HEADPHONE JACK CIRCUIT BOARD</b>						
PW00	1	1	1	1	YK242H2770	P.W. Board, Headphone Jack
	1	1	1	1	ZZ242H2770	P.W. Board Assembly
<b>PW00-RESISTORS</b> (All Resistors are ±5% & 3W)						
RW01	1	1	1	1	GP05331030	330Ω
RW02	1	1	1	1	GP05331030	330Ω
W605	1	1	1	1	YU03180260	Jumper Lead
<b>PW00-MISCELLANEOUS</b>						
JW01	1	1	1	1	YJ01001790	Jack, Headphone
<b>PY00-FUNCTION L.E.D. CIRCUIT BOARD</b>						
PY00	1	1	1	1	YK242H3650	P.W. Board, Function L.E.D.
	1	1	1	1	ZZ242H3650	P.W. Board Assembly
<b>PY00-RESISTORS</b> (All Resistor are ±5%)						
RY01	1	1	1	1	GA05331020	330Ω 2W
RY02	1	1	1	1	GA05332010	3.3kΩ 1W
RY03	1	1	1	1	GA05332010	3.3kΩ 1W
RY04	1	1	1	1	GA05122020	1.2kΩ 2W
<b>PY00-SEMICONDUCTORS</b>						
DY01	6	6	6	6	HI10028320	L.E.D. GL9HD4
DY06						
DY07	1	1	1	1	HI10042030	L.E.D. SLF20B-01
<b>PY00-MISCELLANEOUS</b>						
JY01	1	1	1	1	YJ06002430	Jack (3P)
JY02	1	1	1	1	YJ06002440	Jack (4P)
JY03	1	1	1	1	YJ06002450	Jack (6P)
VY01	1	1	1	1	IN10120150	Lamp
<b>P700-VOLTAGE AMP CIRCUIT BOARD</b>						
P700	1	1	1	1	YK242H3610	P.W. Board, Voltage Amp
	1	1	1	1	ZZ242H3610	P.W. Board Assembly

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
C701	1	1	1	1	DD15151370	<b>P700-CAPACITORS</b>
C702	1	1	1	1	DD15151370	Film 150pF ±5%
C703	1	1	1	1	EA33505030	Film 150pF ±5%
C704	1	1	1	1	EA33505030	Elect 10μF 25V
C705	1	1	1	1	DD15680370	Elect 10μF 25V
C706	1	1	1	1	DD15680370	Ceramic 68pF ±5%
C707	1	1	1	1	DD10030370	Ceramic 68pF ±5%
C708	1	1	1	1	DD10030370	Ceramic 3pF ±0.25pF
C709	1	1	1	1	DD10030370	Mica 3pF ±0.5%
C710	1	1	1	1	DD10030370	Mica 3pF ±0.5%
C711	1	1	1	1	DF16474310	Film 0.47μF ±10%
C712	1	1	1	1	DF16474310	Film 0.47μF ±10%
C713	1	1	1	1	DF16473310	Film 0.047μF ±10%
C714	1	1	1	1	DF16473310	Film 0.047μF ±10%
C715	1	1	1	1	EA10605030	Elect 10μF 50V
C716	1	1	1	1	EA10605030	Elect 10μF 50V
C717	1	1	1	1	EA10710030	Elect 100μF 100V
C718	1	1	1	1	EA10710030	Elect 100μF 100V
C719	1	1	1	1	EA47701630	Elect 470μF 16V
C720	1	1	1	1	EA47701630	Elect 470μF 16V
C721	1	1	1	1	EQ47505030	Elect 4.7μF 50V
C722	1	1	1	1	EQ47505030	Elect 4.7μF 50V
C733	1	1	1	1	DF16223310	Film 0.022μF ±10%
C734	1	1	1	1	DF16223310	Film 0.022μF ±10%
CK01	1	1	1	1	DF15332350	Film 3300pF ±5%
CK02	1	1	1	1	DF15332350	Film 3300pF ±5%
CK03	1	1	1	1	DD15220370	Ceramic 22pF ±5%
CK04	1	1	1	1	DD15220370	Ceramic 22pF ±5%
CK05	1	1	1	1	EA10602530	Elect 10μF 25V
CK06	1	1	1	1	EA10602530	Elect 10μF 25V
CK07	1	1	1	1	DD15220370	Ceramic 22pF ±5%
CK08	1	1	1	1	DK16102300	Ceramic 1000pF ±10%
CN51	1	1	1	1	EA47405030	Elect 0.47μF 50V
CN52	1	1	1	1	DF16222310	Film 2200pF ±10%
CN53	1	1	1	1	EA47602530	Elect 47μF 25V
CN54	1	1	1	1	EA22601630	Elect 22μF 16V
<b>P700-RESISTORS</b> (All Resistors are ±5% & 1/4W)						
R701	1	1	1	1	GD05222140	2.2kΩ
R702	1	1	1	1	GD05222140	2.2kΩ
R703	1	1	1	1	GD05104140	100kΩ
R704	1	1	1	1	GD05104140	100kΩ
R705	1	1	1	1	GD05471140	470Ω
R706	1	1	1	1	GD05471140	470Ω
R707	1	1	1	1	GD05471140	470Ω
R708	1	1	1	1	GD05471140	470Ω
R709	1	1	1	1	GD05104140	100kΩ
R710	1	1	1	1	GD05104140	100kΩ
R711	1	1	1	1	GD05473140	47kΩ
R712	1	1	1	1	GD05473140	47kΩ
R713	1	1	1	1	GD05222140	2.2kΩ
R714	1	1	1	1	GD05222140	2.2kΩ
R715	1	1	1	1	GD05102140	1kΩ
R716	1	1	1	1	GD05102140	1kΩ
R717	1	1	1	1	GD05222140	2.2kΩ
R718	1	1	1	1	GD05222140	2.2kΩ
R719	1	1	1	1	GD05474140	470kΩ
R720	1	1	1	1	GD05474140	470kΩ

- (U): for U.S.A.
- (N): for Europe

- (A): Australia
- (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION	REF. DESIG.	Q'TY				PART NO.	DESCRIPTION	
	U	N	A	P				U	N	A	P			
R721	1	1	1	1	GD05474140	470kΩ	RK21	1	1	1	1	GD05473140	47kΩ	
R722	1	1	1	1	GD05474140	470kΩ	RK22	1	1	1	1	GD05473140	47kΩ	
R723	1	1	1	1	GD05183140	18kΩ	RK23	1	1	1	1	GD05104140	100kΩ	
R724	1	1	1	1	GD05183140	18kΩ	RK24	1	1	1	1	GD05104140	100kΩ	
R725	1	1	1	1	RA02230020	Trimming 22kΩ	RK25	1	1	1	1	GD05222140	2.2kΩ	
R726	1	1	1	1	RA02230020	Trimming 22kΩ	RK26	1	1	1	1	GD05222140	2.2kΩ	
R727	1	1	1	1	GD05183140	18kΩ	RK27	1	1	1	1	GD05222140	2.2kΩ	
R728	1	1	1	1	GD05183140	18kΩ	RK28	1	1	1	1	GD05471140	470Ω	
R729	1	1	1	1	RA02230020	Trimming 22kΩ	RK29	1	1	1	1	GD05471140	470Ω	
R730	1	1	1	1	RA02230020	Trimming 22kΩ	RK30	1	1	1	1	GD052221010	220Ω 1W	
R731	1	1	1	1	GD05153140	15kΩ	RN51	1	1	1	1	GD05473140	47kΩ	
R732	1	1	1	1	GD05153140	15kΩ	RN52	1	1	1	1	GD05473140	47kΩ	
R733	1	1	1	1	RA02230020	Trimming 22kΩ	RN53	1	1	1	1	GD05823140	82kΩ	
R724	1	1	1	1	RA02230020	Trimming 22kΩ	RN54	1	1	1	1	GD05823140	82kΩ	
△ R735	1	1	1	1	GD05332140	3.3kΩ	RN55	1	1	1	1	GD05183140	18kΩ	
△ R736	1	1	1	1	GD05332140	3.3kΩ	RN56	1	1	1	1	GD05474140	470Ω	
R737	1	1	1	1	GD05153140	15kΩ	RN57	1	1	1	1	GD05273140	27kΩ	
R738	1	1	1	1	GD05153140	15kΩ	RN58	1	1	1	1	GD05152140	1.5kΩ	
R739	1	1	1	1	GD05103140	10kΩ	RN59	1	1	1	1	GD05104140	100kΩ	
R740	1	1	1	1	GD05103140	10kΩ	RN60	1	1	1	1	GD05223140	22kΩ	
R741	1	1	1	1	GD05821140	820Ω	P700-SEMICONDUCTORS							
R742	1	1	1	1	GD05821140	820Ω	D701	1	1	1	1	HD30020090	Zener BZ-150	
R743	1	1	1	1	GD05471140	470Ω	D702	1	1	1	1	HD30020090	Zener BZ-150	
R744	1	1	1	1	GD05471140	470Ω								
△ R745	1	1	1	1	GA05271020	270Ω 2W	DK01	1	1	1	1	HD20001210	Diode 1S2473	
△ R746	1	1	1	1	GA05821010	820Ω 1W	DK02	1	1	1	1	HD20001210	Diode 1S2473	
R747	1	1	1	1	GD05823140	82kΩ	DK03	1	1	1	1	HD20001210	Diode 1S2473	
R748	1	1	1	1	GD05823140	82kΩ	DK04	1	1	1	1	HD20001210	Diode 1S2473	
R749	1	1	1	1	GD05123140	12kΩ	DK05	1	1	1	1	HD30001020	Zener MA1033	
R750	1	1	1	1	GD05123140	12kΩ	DK06	1	1	1	1	HD30001020	Zener MA1033	
R781	1	1	1	1	RA02230020	Trimming 22kΩ (B)	DK07	1	1	1	1	HD20001210	Diode 1S2473	
R782	1	1	1	1	RA02230020	Trimming 22kΩ (B)	DK08	1	1	1	1	HD20001210	Diode 1S2473	
R783	1	1	1	1	GD05100140	10Ω	DK09	1	1	1	1	HD30036010	Zener HZ6LA-1	
R785	1	1	1	1	RF05470140	Fusible 47Ω	DN51	1	1	1	1	HD30007020	Zener MA1091M	
R786	1	1	1	1	RF05470140	Fusible 47Ω	DN52	1	1	1	1	HD30017090	Zener BZ090	
RK01	1	1	1	1	GD05123140	12kΩ	Q701	1	1	1	1	HC10141030	IC STK3122	
RK02	1	1	1	1	GD05123140	12kΩ	Q703	1	1	1	1	HC10008090	IC NJM4558	
RK03	1	1	1	1	GD05102140	1kΩ	Q704	1	1	1	1	HC10008090	IC NJM4558	
RK04	1	1	1	1	GD05102140	1kΩ	Q707	1	1	1	1	HT110152A0	Transistor 2SA1015 (O or Y)	
RK05	1	1	1	1	GD05473140	47kΩ	Q708	1	1	1	1	HT110152A0	Transistor 2SA1015 (O or Y)	
RK06	1	1	1	1	GD05473140	47kΩ	QK01	1	1	1	1	HC10009090	IC NJM2901	
RK07	1	1	1	1	GD05272140	2.7kΩ	QK02	1	1	1	1	HC712301A0	IC HD74LS123	
RK08	1	1	1	1	GD05272140	2.7kΩ	QK03	1	1	1	1	HT327852C0	Transistor 2SC2785	
RK09	1	1	1	1	GD05223140	22kΩ	QK04	1	1	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)	
RK10	1	1	1	1	GD05223140	22kΩ	QK05	1	1	1	1	HW10005320	Photo Unit	
RK11	1	1	1	1	GD05123140	12kΩ	QN51	1	1	1	1	HC10042050	IC TA7317P	
RK12	1	1	1	1	GD05123140	12kΩ	QN52	1	1	1	1	HT109701A0	Transistor 2SA970 GR	
RK13	1	1	1	1	GD05103140	10kΩ	J701	1	1	1	1	YP06001040	P700-MISCELLANEOUS	
RK14	1	1	1	1	GD05103140	10kΩ	J702	1	1	1	1	YJ06002430	Plug (3P)	
RK15	1	1	1	1	GD05224140	220kΩ	J703	1	1	1	1	YJ06001430	Jack (3P)	
RK16	1	1	1	1	GD05224140	220kΩ	J704	1	1	1	1	YJ06001430	Jack (9P)	
RK17	1	1	1	1	GD05122140	1.2kΩ	TP08	1	1	1	1	YJ07000850	Jack (2P)	
RK18	1	1	1	1	GD05122140	1.2kΩ	TP09	1	1	1	1	YJ07000850	Jack (2P)	
RK19	1	1	1	1	GD05104140	100kΩ								
RK20	1	1	1	1	GD05104140	100kΩ								

• (U): for U.S.A.      • (A): for Australia  
 • (N): for Europe      • (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION	REF. DESIG.	Q'TY				DESCRIPTION	
	U	N	A	P				U	N	A	P		
P701	1	1	1	1	YK242H1210	P701-MAIN AMP CIRCUIT BOARD	△ RN01	4	4	4	4	GG05331140	330Ω
	1	1	1	1	ZZ242H1210	P.W. Board Main Amp	△ RN04	4	4	4	4	GG05472140	4.7kΩ
					ZZ242H8210	P.W. Board Assembly	RN05	4	4	4	4	GD05393140	39kΩ
					ZZ242H7210	P.W. Board Assembly	RN08	1	1	1	1	GD05393140	39kΩ
C723	4	4	4	4	DD15101560	P701-CAPACITORS	RN10	1	1	1	1	GD05472140	4.7kΩ
C726	1	1	1	1	DF15473550	Ceramic 100pF ±5%	RN12	1	1	1	1	GD05472140	4.7kΩ
C727	1	1	1	1	DF16104310	Film 0.047μF ±5%	RN13	1	1	1	1	GD05472140	4.7kΩ
C727	1	1	1	1	DF15473550	Film 0.1μF ±10%	RN17	1	1	1	1	GD05273140	27kΩ
C728	1	1	1	1	DF16104310	Film 0.047μF ±5%	△ RN31	1	1	1	1	GA05272010	2.7kΩ 1W
C728	1	1	1	1	DF16104310	Film 0.1μF ±10%	D703	4	4	4	4	HD20022030	P701-SECMICROCONDUCTORS
C730	1	1	1	1	DF16104310	Film 0.1μF ±10%	D706	1	1	1	1	HD20022030	Diode DSF10C
C731	1	1	1	1	DF16104310	Film 0.1μF ±10%	△ D805	1	1	1	1	HD20011290	Diode DSF10C
C801	1	1	1	1	EC16904520	Elect 16000μF 45V	△ D807	1	1	1	1	HD20011290	Diode S3V20
C802	1	1	1	1	EC16904520	Elect 16000μF 45V	△ D808	1	1	1	1	HD20022030	Diode DSF10C
C803	1	1	1	1	EC19907510	Elect 19000μF 75V	△ D809	1	1	1	1	HD20022030	Diode DSF10C
C804	1	1	1	1	EC19907510	Elect 19000μF 75V	D810	1	1	1	1	HD20011290	Diode S3V20
C817	1	1	1	1	DK16331550	Ceramic 330pF ±10%	D811	1	1	1	1	HD20014010	Diode 1S2471
C818	1	1	1	1	DK16331550	Ceramic 330pF ±10%	D812	1	1	1	1	HD20014010	Diode 1S2471
C861	1	1	1	1	EA10505030	Elect 1μF 50V	DN01	8	8	8	8	HD20014010	Diode 1S2471
CN01	4	4	4	4	DF16102310	Film 1000pF ±10%	DN08	1	1	1	1	HD20014010	Diode 1S2471
CN04	4	4	4	4	DF16102310	P701-RESISTORS (All Resistors are ±5% & 1/2W)	DN31	1	1	1	1	HD20014010	Diode 1S2471
R751	4	4	4	4	GD05470140	47Ω	△ Q709	1	1	1	1	HT326822B0	Transistor 2SC2682 (Q or E)
R754	1	1	1	1	GG05102140	1kΩ	△ Q710	1	1	1	1	HT326822B0	Transistor 2SC2682 (Q or E)
R755	1	1	1	1	GG05102140	1kΩ	△ Q711	1	1	1	1	HT111422B0	Transistor 2SA1142 (Q or E)
R756	1	1	1	1	GG05151120	1kΩ 1/2W	△ Q712	1	1	1	1	HT111422B0	Transistor 2SA1142 (Q or E)
△ R757	1	1	1	1	GG05151120	150Ω 1/2W	△ Q713	1	1	1	1	HT332982D0	Transistor 2SC3298 (Q or Y)
△ R758	1	1	1	1	GG05151120	3.3Ω	△ Q714	1	1	1	1	HT332982D0	Transistor 2SC3298 (O or Y)
R759	4	4	4	4	GG05033140	0.47Ω 5W	△ Q715	1	1	1	1	HT113062D0	Transistor 2SA1306 (O or Y)
R762	1	1	1	1	GG05033140	0.47Ω 5W	△ Q716	1	1	1	1	HT113062D0	Transistor 2SA1306 (O or Y)
△ R763	1	1	1	1	BW10000060	2.2Ω 1/2W	△ Q717	1	1	1	1	HT329222B0	Transistor 2SC2922 (O or Y)
△ R764	1	1	1	1	BW10000060	2.2Ω 1/2W	△ Q718	1	1	1	1	HT329222B0	Transistor 2SC2922 (O or Y)
R767	1	1	1	1	GG05022120	2.2Ω 1/2W	△ Q719	1	1	1	1	HT112162B0	Transistor 2SA1216 (O or Y)
R768	1	1	1	1	GG05022120	2.2Ω 1/2W	△ Q720	1	1	1	1	HT112162B0	Transistor 2SA1216 (O or Y)
R769	1	1	1	1	GA05047030	4.7Ω 3W	△ Q807	1	1	1	1	HT335193A0	Transistor 2SC3519 (O or P or Y)
R770	1	1	1	1	GA05047030	4.7Ω 3W	△ Q808	1	1	1	1	HT332982D0	Transistor 2SC3298 (O or Y)
R813	1	1	1	1	GD05183140	18kΩ	△ Q809	1	1	1	1	HT323622A0	Transistor 2SC2362 (F or G)
R814	1	1	1	1	GG05222120	2.2kΩ 1/2W							
R815	1	1	1	1	GG05152120	1.5kΩ 1/2W							
R816	1	1	1	1	GG05102140	1kΩ							
R817	1	1	1	1	GG05152120	1.5kΩ 1/2W							
R818	1	1	1	1	GG05222120	2.2kΩ 1/2W							
R819	1	1	1	1	GD0533140	33kΩ							

• (U): for U.S.A.  
• (N): for Europe

• (A): for Australia  
• (P): for PX

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
△ Q810	1	1	1	1	HT113863A0	Transistor 2SA1386 (O or P or Y)
△ Q811	1	1	1	1	HT113062D0	Transistor 2SA1306 (O or Y)
△ Q812	1	1	1	1	HT110162A0	Transistor 2SA1016 (F or G)
Q813	1	1	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)
Q814	1	1	1	1	HT111752C0	Transistor 2SA1175 (HF or FF)
QN01	1	1	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)
QN02	1	1	1	1	HT327852C0	Transistor 2SC2785 (HF or FF)
QN03	1	1	1	1	HT111752C0	Transistor 2SA1175 (HF or FF)
QN04	1	1	1	1	HT111752C0	Transistor 2SA1175 (HF or FF)
QN05	1	1	1	1	HT322401A0	Transistor 2SC2240 GR
QN06	1	1	1	1	HT322401A0	Transistor 2SC2240 GR
<b>P701-MISCELLANEOUS</b>						
J604	1	1	1	1	YJ06002440	Jack (4P)
J605	1	1	1	1	YJ06002430	Jack (3P)
J609	1	1	1	1	YJ06002430	Jack (3P)
J705	1	1	1	1	YP06001070	Jack (9P)
J706	1	1	1	1	YP06001070	Jack (9P)
J801	1	1	1	1	YP06001040	Plug (3P)
J802	1	1	1	1	YP06001050	Plug (5P)
L751	1	1	1	1	LL23905120	Coil 1mH
L752	1	1	1	1	LL23905120	Coil 1mH
LN31	1	1	1	1	LY20240240	Relay L24

REF. DESIG.	Q'TY				PART NO.	DESCRIPTION
	U	N	A	P		
P702	1	1	1	1	YK242H3630	<b>P702-BIAS CIRCUIT BOARD</b> P.W. Board, Bias
	1	1	1	1	ZZ242H3630	P.W. Board Assembly
Q705	1	1	1	1	HT315682B0	<b>P702-SEMICONDUCTORS</b> Transistor 2SC1568 (R or S)
P703	1	1	1	1	YK242H3640	<b>P703-BIAS CIRCUIT BOARD</b> P.W. Board, Bias
	1	1	1	1	ZZ242H3640	P.W. Board Assembly
Q706	1	1	1	1	HT315682B0	<b>P703-SEMICONDUCTORS</b> Transistor 2SC1568 (R or S)

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

**NOTE ON SAFETY:**

Symbol △ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol △. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

## 11. TECHNICAL SPECIFICATIONS

### AUDIO SECTION

#### POWER OUTPUT PER CHANNEL

DIN 4 OHMS . . . . .	180 W
RMS 4 OHMS (20 Hz – 20 kHz) . . . . .	140 W
DIN 8 OHMS . . . . .	130 W
RMS 8 OHMS (20 Hz – 20 kHz) . . . . .	120 W
TOTAL HARMONIC DISTORTION AT RMS 8 OHMS . . . . .	0.015%
I.M. DISTORTION . . . . .	0.015%
DAMPING FACTOR 8 OHMS (1 kHz) . . . . .	90

#### MM CARTRIDGE INPUT

Frequency Response (RIAA) . . . . .	±0.2 dB
Signal-to-Noise Ratio (A weighted) . . . . .	92 dB
Input Impedance . . . . .	47 k ohms
Input Sensitivity . . . . .	2.5 mV
Equivalent Input Noise . . . . .	0.07 µV

#### MC CARTRIDGE INPUT

Input Sensitivity . . . . .	250 µV
Input Impedance MC . . . . .	(High MC) 1 k ohms (MC) 100 ohms
Signal-to-Noise Ratio (A weighted) . . . . .	80 dB

#### AUX. INPUT

Input Impedance . . . . .	25 k ohms
Input Sensitivity . . . . .	150 mV
Frequency Response (±1 dB) . . . . .	(Direct Position) 5 Hz – 45 kHz
Signal-to-Noise Ratio (A weighted) . . . . .	98 dB

#### OUTPUT VOLTAGE

Tape Out [PHONO (MM) 7.75 mV 1 kHz Input] . . . . .	520 mV
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#### OUTPUT IMPEDANCE

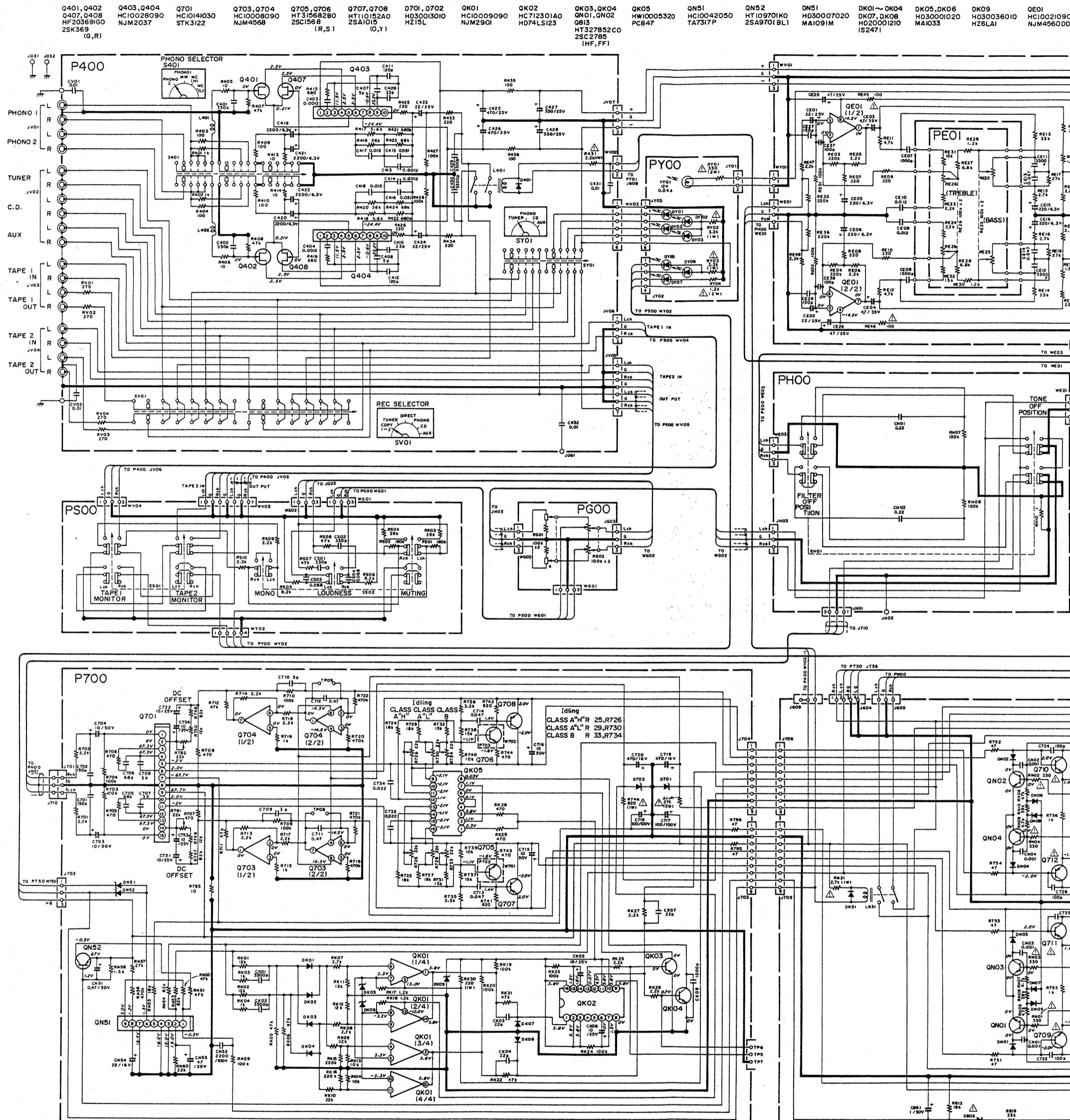
Tape Out (PHONO) . . . . .	490 ohms
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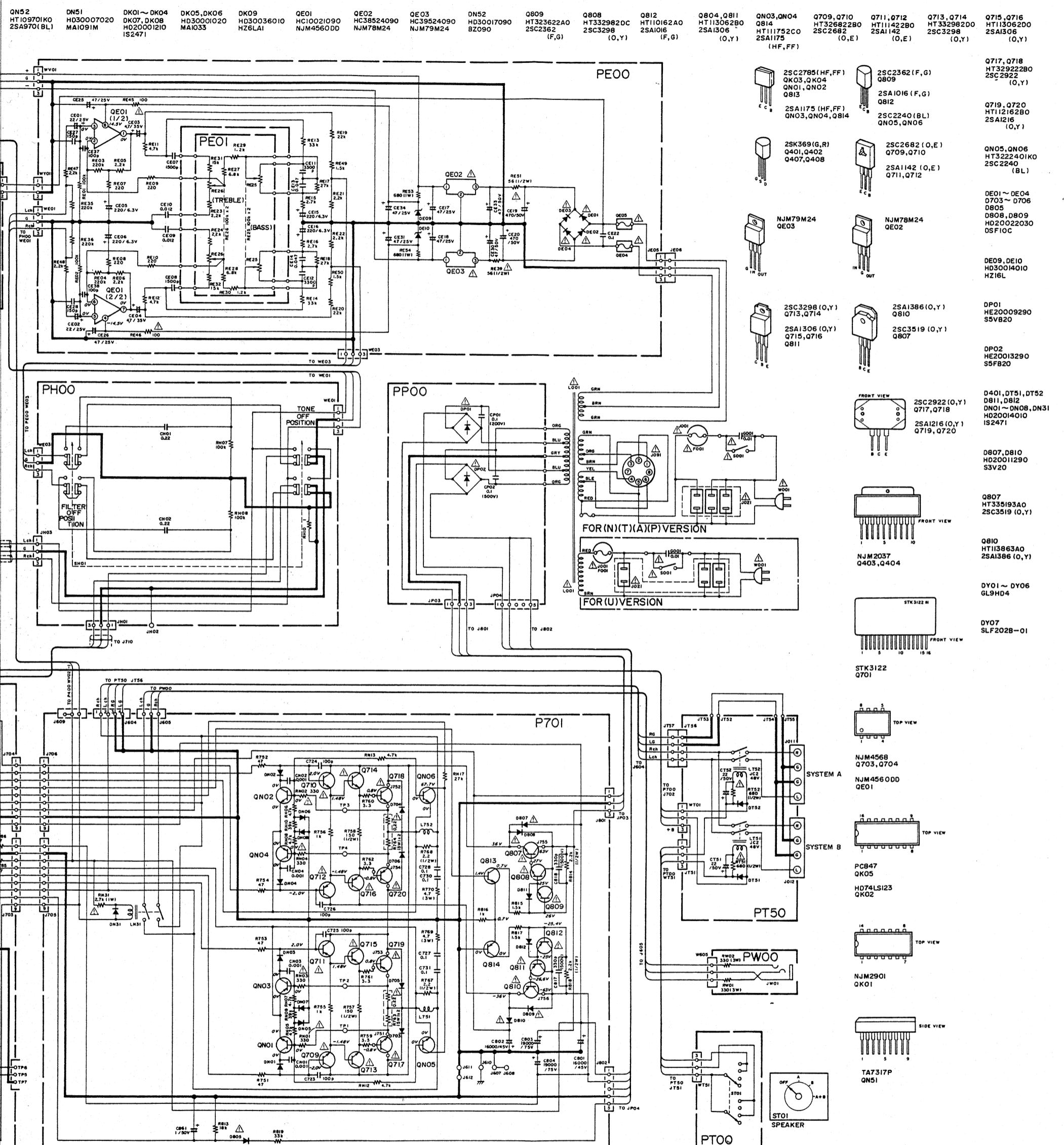
#### GENERAL

Power Requirements . . . . .	110/120/220/240 V AC, 50/60 Hz
Power Consumption at Rated Output, both Channels Operating . . . . .	500 W
Dimensions (W x H x D) . . . . .	416 x 146 x 410 mm
Weight . . . . .	18 kg

Specifications and appearance are subject for modification without notice.

## 12. SCHEMATIC DIAGRAM





ents and wiring are subject to change for modification without notice.